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PROFESSIONAL WOMEN AND MINORITIES

A Manpower Data Resource Service

Fifth Edition

BETTY M. VETTER

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FOREWORD

This book is designed to provide current and historical statistics about the professional segment of the U.S. population and particularly the participation and availability of women and minorities in those areas which generally require formal education to at least the baccalaureate level. Because more information is available in some fields than in others, the comprehensiveness of coverage varies. While we have attempted to locate all available data sources, and to provide the most current statistics available, we welcome notification of any data that we may have missed. Between annual editions, new data are published regularly in MANPOWER COMMENTS, a periodical digest available from the Scientific Manpower Commission (see Bibliography for details).

We wish to thank those professional associations, women's groups and individuals who have responded to our request for current information or data, and for their permission to use that data in this compilation. We also express our appreciation to the more than 2,000 users of the earlier editions for their continued interest in the data both to measure their progress and to formulate plans.

Our special thanks go to the Ford Foundation for a grant which supported the final six months of work in collecting, assembling, reviewing and publishing the first edition of this book in 1975. Without that first edition, this continuing data source would not have been possible. We also acknowledge with thanks the special assistance of Sally Yochelson, Tim Babco and Barbara Willard.

Betty M. Vetter and Eleanor L. Babco

INTRODUCTION

Organization of the Book

The data tables are organized in ten chapters, and tables are numbered consecutively within each chapter.

The Table of Contents outlines both the chapter arrangement and the organization of tables within the chapter. The first five chapters on general enrollments, general degrees, general professions, general workforce and academic workforce include both tables which do not specify subject fields and tables where several subject fields are included. In the section on general professions, data for individual professions such as business administration and law follow tables that include data for multiple fields.

The organization of tables in chapters six through ten, which are devoted to subject fields, provide data on degrees (doctorates first) followed by enrollments, general workforce, academic workforce and federal workforce participation. Except for tables which include both sex and minority proportions, those which delineate the population by sex generally precede those which delineate by minority status.

When the field is designated at the top of the page, table headings do not necessarily include the name of the field.

When the year or years covered by the table are included within the table, the dates are not always repeated in the table title.

The **Index** is by page number. The Index, rather than the Table of Contents, is the place to begin a search for data in a particular field, since enrollment, degree and employment information about that field will also be found in the early chapters. Cross-indexing allows finding the data references in a number of ways.

The source or sources of data for each table are noted above the table. The bibliography, organized alphabetically by publisher, provides specific information about each source.

An annotated list of Recruitment Resources is arranged alphabetically for sources pertaining to specific disciplines, followed by rosters with general or multifield coverage.

The Data

More than 200 published and previously unpublished data sources were used to prepare the statistical tables and charts in this book, including reports and other materials from government agencies, professional associations and women's and/or minority groups and caucuses. The source or sources for each table appear at the top of the table, with the full bibliographic entry provided in the Bibliography.

Generally, exact correlation of results of different surveys is not possible since it is rare to find two data sources with exactly the same time and population base. Different results occur because of differences in the survey populations, in the time frames, in the way similar questions were asked, in terminology, in analysis, or in the type of respondent. For example, degree data collected by the National Center for Education Statistics is obtained from college and university registrars, while that collected by the professional societies generally comes from department heads and that collected by the National Research Council comes from the doctorate recipients themselves. Thus, while degree data will be similar, it is not identical from one source to another, usually because of differences in field taxonomy.

Different methods of analysis, particularly in data on minorities, also will produce different statistical results. The several problems for the data analyst include the method of treatment for non-respondents, the respondents who list multiple minority status, responses from a third party rather than from the individuals themselves, inclusion or exclusion of non-citizens in the survey population or unrepresentative population samples.

Differences in treatment of non-respondents to questions of sex or ethnicity may produce large statistical differences in calculating the proportion of minorities or women within a particular population.

Some surveys assume that non-respondents to the sex or ethnic question are in the same proportion as respondents, and remove all non-respondents before calculating the percentages of women and minority participants. Still others calculate percentages from a total which includes non-respondents, thus giving a lower percentage for minorities than may be the case. Additionally, many studies dealing with minority populations do not separate foreign nationals from U.S. citizens or those eligible for citizenship. This single factor, particularly within the Asian minority among scientists and engineers, changes the sex and minority proportion substantially, as does the inclusion of foreign nationals in the base numbers for enrollments and degrees in such graduate fields as engineering. This edition includes more data than were previously available on citizenship, particularly in the science and engineering fields.

In most data sets, minority data are not subdivided by sex, and conversely data on women fail to distinguish majority from minority women. Thus, the availability of minority women in specific fields is often difficult to determine. Where available, we have included both the sex and minority subdivision. Included again in this edition are data from the 1980 Census Special EEO File, which provides both sex and race/ethnicity breakouts by occupation.

This book does not attempt to determine which data are more likely to be correct when differences occur, but when available, the population base used for calculating the percentages is indicated in the table title or footnotes.

Correlating Degree and Workforce Data

There are frequently fairly major differences between the proportions of degrees granted to women and minorities in any particular field and the proportions of those persons found in the workforce for that field. This may occur because of field switching, differences in nomenclature between degree fields and job titles, and because of the problems of similar but non-identical population bases outlined above. The lower proportion of women in a working population than their proportion of earned degrees may also indicate that proportionally more women than men have left the workforce in that field either temporarily or permanently. Some data sets show that women are somewhat less likely than men to find employment that is linked with their major field of study, particularly among recent graduates. Some new tables on underemployment are included for the first time in this edition.

Few data are available on the workforce participation of women and minorities in the arts, humanities and education. One reason is that persons with degrees in those fields may appear in almost any occupation in the workforce, and are generally classed in the same field as the degree field only when they are in the academic workforce.

In many instances, this book incorporates both historical and current data so that progress may be measured and changing trend lines incorporated in planning for the future. In some cases, we have included older data because nothing more current could be obtained. However, in this edition, we have dropped most tables where the most recent data available are for 1979 or earlier.

Through the wording of table headings and the use of footnotes to tables, we have tried to offer as much information as possible regarding the inclusiveness of the data in any table. Usually a more comprehensive explanation of methodology can be found in the original data source which is listed in the Bibliography. A single source for much of the information is Guide to Data on Scientists and Engineers, (Scientific Manpower Commission, 1984), available in all university libraries. Research groups or other libraries may request a copy, from the Scientific Manpower Commission.

Terminology for Minority Groups

Only in the past few years has a common set of designations for minority populations come into general use. In this book, tables generally use the terminology of the original source from which the table was derived.

AFFIRMATIVE ACTION

Federal laws and regulations prohibit discrimination in conditions of employment including recruitment, hiring, lay-off, discharge and recall, and in-service training; opportunities for promotion; participation in training programs; wages and salaries; sick leave time and pay; vacation time and pay; over-time work and pay; medical, hospital, life and accident insurance; and optional and compulsory retirement.

Statutes and Orders Requiring Equal Employment Opportunity and Affirmative Action

The Equal Pay Act of 1963, the first sex discrimination legislation enacted, requires equal pay for equal work regardless of sex. Title IX of the Education Amendments Act of 1972 extends the coverage to executive, administrative and professional employees, including all faculty; and to outside sales people.

Executive Order 11246 as amended by Executive Orders 11375 and 12086 prohibits discrimination in employment by all employers who hold federal contracts, and requires affirmative action programs by all federal contractors and sub-contractors. Firms with contracts over $100,000 and with 100 or more employees must develop and implement written programs of affirmative action.

Title VI of the Civil Rights Act of 1964 forbids discrimination against students on the basis of race, color, or national origin in all federally assisted programs. Employment is not generally covered except when employment is the purpose of the assistance.

Title VII of the Civil Rights Act of 1964 as amended by the Equal Employment Opportunity Act of 1972 forbids discrimination on the basis of race, color, national origin, religion or sex in any term, condition of privilege of employment, including sexual harassment, by unions, employment agencies and employers. The law was amended on March 24, 1972 to cover all public and private educational institutions, as well as state and local governments. It applies to all employers, public or private, whether or not they recieve any federal funds. Title VII covers all private employers of fifteen or more persons.

Title IX of the Education Amendments of 1972 forbids discrimination on the basis of sex in all federally assisted education programs in all institutions, public and private, that receive federal monies through grants, loans or contracts. The Supreme Court determined in the Spring of 1982 that Title IX's prohibition of sex discrimination applies to both students and employees of educational institutions. Title IX Regulations have been applied broadly to activities "assisted or benefited by federal funds," but the Supreme Court ruled in March 1984 that Title IX applies only to programs or activities that receive direct federal support, rather than to entire institutions. What constitutes a "program" or "activity" was not addressed. Legislation moving through Congress, the Civil Rights Act of 1984 (HR 5490 and S-2568), would apply Title IX to all activities, education programs and educational institutions; and also would broaden the coverage of Title VI of the Civil Rights Act of 1964 and Section 504 of the Vocational Rehabilitation Act.

Section 504 of the Vocational Rehabilitation Act of 1973 prohibits discrimination against handicapped persons by federal contractors, and requires such contractors to take affirmative action to employ such persons.

Regulation and Enforcement

Prior to 1978, a number of federal agencies were variously responsible for writing regulations to govern these orders and statutes and to enforce the regulations. These agencies included the Labor Department, the Justice Department, the Department of Health, Education and Welfare, and the Equal Employment Opportunity Commission which is appointed by the President.

On February 23, 1978, President Carter submitted to Congress a plan to reorganize federal equal employment opportunity enforcement activities. EEOC is the principal agency responsible for enforcement for all public and private non-federal employers and unions, and within the federal government. EEOC took over from the Labor Department on July 1, 1979 enforcement of the Equal Pay Act and the Age Discrimination Act.

Enforcement of Executive Order 11246 as amended by Executive Order 12086 and Executive Order 11375 remains with the Office of Federal Contract Compliance Programs (OFCCP) in the Department of Labor. All federal contractors deal with OFCCP.

The Justice Department continues to have responsibility for litigation against state and local governments under Title VII, and represents the government in suits against federal contractors. The Attorney General may initiate "pattern and practice" suits under Title VII in the public sector.

The Department of Education enforces compliance with Title IX. New regulations following the Supreme Court decision to limit Title IX to specific programs or activities receiving federal funds are not yet published.

EEOC, the Justice Department and the Labor Department published final regulations for uniform employment guidelines which became effective September 25, 1978. The regulations are published as Part IV in the August 25, 1978 issue of the Federal Register. New regulations based on the amended Executive Order eliminate pre-contract award compliance review, and limit suits to "identifiable victims of bias" rather than allowing broad, class action suits for unnamed individuals who might have been affected.

What is Affirmative Action?

Broadly speaking, affirmative action consists of actions to end discrimination and to remedy the effects of past discrimination. It includes such activities as notifying women's and minority groups about job openings, advertising job openings rather than relying on word-of-mouth notification, developing recruitment procedures aimed at women and minorities as well as other qualified applicants, and providing equal opportunities for advancement.

Affirmative Action under Executive Order 11246 also requires establishment of an Affirmative Action Plan which includes numerical goals and time tables for increasing the participation of women and/or minorities.

Goals are targets for the inclusion of people previously excluded, and are an attempt to estimate the composition of the employer's workforce if there were no illegal discrimination based on race or sex. In general, goals for professional positions are aligned with the number or percentage of qualified women or minorities available rather than with their general representation within the population.

Quotas, on the other hand, are illegal unless assigned by a court as the result of a finding of discrimination, since they are in themselves discriminatory and act to keep some qualified people out of the applicant pool to be considered.

Under the Executive Order, all job classifications must be reviewed in order to identify under-utilization of women and minorities. Data should be provided simultaneously on race and sex. If current recruitment practices have resulted in a "significantly lower representation" of women and minorities in the applicant pool than would be expected from their availability in the labor force, then new sources of recruitment must be developed. An employer is assumed to be utilizing "reasonable" numbers of persons in protected classes if his workforce includes at least 80 percent of their representation within the eligible populations.

Affirmative action plans are required to include a system of accountability and monitoring. This system may be centralized in an institution-wide or a corporation-wide office which maintains records and monitors individual units or departments and makes an annual report; or in individual units or departments which may maintain records separately of all applicants and hires as well as records of the efforts made to recruit women and minorities. In either case, records should allow for an ongoing analysis of all employment decisions in recruiting, hiring, promoting and setting salaries.

The employer sets the criteria for every job, both in terms of the level of academic preparation required, experience and other factors. The criteria must be applied equally to men and women and to those of all ethnic backgrounds. They must be clearly related to the job to be filled, and they must not in themselves be discriminatory. For example, criteria which gave preference to the hiring of persons who did their undergraduate work at an Ivy League School would be discriminatory in that women, have, until recently, been denied the opportunity to attend such institutions.

The Uniform Guidelines on Employee Selection Procedures protect the rights of workers to be hired and promoted on the basis of job-related standards and without regard to race, sex or national origin. These guidelines apply to all employers, public and private, including academic institutions. Their underlying principle is that tests and other selection procedures that have an adverse impact on minorities and women are illegal unless validated by showing a clear relation between performance on the test and performance on the job. The guidelines adopt a "rule of thumb" as a practical but not absolute, means of determining whether there has been an adverse impact. Generally, a selection rate for any race, sex or ethnic group which is less than 80% of the rate for the group with the highest selection rate is regarded as adverse impact. For professional positions in which women or minorities represent less than 20% of the available pool, statistical evidence of such proportions will be necessary.

Evidence of the validity of a selection procedure generally is not required if there is no adverse impact. The guidelines provide that, in considering whether to take enforcement action, the government will take into account the general posture of the employer regarding equal employment opportunity, including its affirmative action plan and the results achieved under the plan.

Numerical goals have been upheld in the courts as relief for a substantiated pattern of discrimination. Each goal is tailor-made to a specific situation, taking into account expected turnover, vacancies, promotions and the availability of qualified women and minorities. The goal varies for different job classifications and may be general as for "chemists" or more specific as for "doctoral organic chemists."

If an institution fails to meet its goals, and if adverse impact on women or minorities is indicated by its results, that institution must show that it has made a good faith effort to recruit, hire and promote qualified women and minorities; and it must be able to produce records documenting these efforts. Such efforts may include contact with women's and minority groups or caucuses including those relevant to particular disciplines (see Recruitment Resources); contact with individual women or minority professionals for referral of candidates; evidence of evaluation of those women and minorities already employed who might qualify for the job openings; and letters to colleagues and job advertisements which indicate that the employer welcomes applications from all qualified candidates.

If the best qualified person is white and male, that person can be hired. However, if called upon to do so, the employer must be able to demonstrate that a genuine good faith effort has been made to recruit qualified women and minorities; that objective, job-related criteria were specified before the hiring process; and that these criteria have been applied equally to women, minorities and white men.

Some regulations issued during previous administrations are still under this review, plus recent Supreme Court rulings and pending legislation may bring about other changes than those outlined here.

CHAPTER 1

GENERAL ENROLLMENTS

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SOURCE: National Center for Health Statistics, Personal Communication

TABLE 1-1

LIVE BIRTHS IN THE U.S. BY SEX: 1933-1981

YEAR	TOTAL	MALE	FEMALE
1933	2,081,232	1,068,871	1,012,361
1934	2,167,636	1,112,703	1,054,933
1935	2,155,105	1,105,489	1,049,616
1936	2,144,790	1,099,465	1,045,325
1937	2,203,337	1,130,641	1,072,696
1938	2,286,962	1,172,541	1,114,421
1939	2,265,558	1,162,600	1,102,988
1940	2,360,399	1,211,684	1,148,715
1941	2,513,427	1,289,734	1,223,693
1942	2,808,996	1,444,365	1,364,631
1943	2,936,860	1,508,959	1,427,901
1944	2,794,800	1,435,301	1,359,499
1945	2,735,456	1,404,587	1,330,869
1946	3,288,672	1,691,220	1,597,452
1947	3,699,940	1,899,876	1,800,064
1948	3,535,068	1,813,852	1,721,216
1949	3,559,529	1,826,352	1,733,177
1950	3,554,149	1,823,555	1,730,594
1951	3,750,850	1,923,020	1,827,830
1952	3,846,986	1,971,262	1,875,724
1953	3,902,120	2,001,798	1,900,322
1954	4,017,362	2,059,068	1,958,294
1955	4,047,295	2,073,719	1,973,576
1956	4,163,090	2,133,588	2,029,502
1957	4,254,784	2,179,960	2,074,824
1958	4,203,812	2,152,546	2,051,266
1959	4,244,796	2,173,638	2,071,158
1960	4,257,850	2,179,708	2,078,142
1961	4,268,326	2,186,274	2,082,052
1962	4,167,362	2,132,466	2,034,896
1963	4,098,020	2,101,632	1,996,388
1964	4,027,490	2,060,162	1,967,328
1965	3,760,358	1,927,054	1,833,304
1966	3,606,274	1,845,862	1,760,412
1967	3,520,959	1,803,388	1,717,571
1968	3,501,564	1,796,326	1,705,238
1969	3,600,206	1,846,572	1,753,634
1970	3,731,386	1,915,378	1,816,008
1971	3,555,970	1,822,910	1,733,060
1972	3,258,411	1,669,927	1,588,484
1973	3,136,965	1,608,326	1,528,639
1974	3,159,958	1,622,114	1,537,844
1975	3,144,198	1,613,135	1,531,063
1976	3,167,788	1,624,436	1,543,352
1977	3,326,632	1,705,916	1,620,716
1978	3,333,279	1,709,394	1,623,885
1979	3,494,398	1,791,267	1,703,131
1980	3,612,258	1,852,616	1,759,642
1981	3,629,238	1,860,272	1,768,966

SOURCE: The Third National Mathematics Assessment Results, Trends, and Issues, National Assessment of Education Progress, Education Commission of the States, Report 13-MA-01, April 1983

TABLE 1-2

CHANGES IN MEAN PERFORMANCE ON THE MATHEMATICS ASSESSMENT, BY SEX AND RACIAL/ETHNIC GROUP, 1978-1982

Assessment component	Male			Female		
	9-year olds	13-year olds	17-year olds	9-year olds	13-year olds	17-year olds
Overall Performance (1982)	55.8%	60.4%	61.6%	56.9%	60.6%	58.9%
Change (1978-82)	+0.5%	+4.0%[1]	-0.4%	+1.4%[1]	+3.7%[1]	+0.1%
Knowledge	67.4	73.8	75.9	69.3	73.8	73.9
Change	+1.0	+4.4[1]	0.0	+1.9[1]	+4.5[1]	+0.4
Skills	50.2	57.0	61.1	51.1	58.2	58.9
Change	+0.5	+4.2[1]	+0.2	+1.2	+3.8[1]	+0.4
Understanding	41.0	60.8	63.1	41.4	60.2	60.0
Change	-1.3	+4.2[1]	-1.0	+0.4	+3.7[1]	+0.2
Applications	40.0	46.1	44.6	39.2	45.1	40.2
Change	+0.4	+2.2[1]	-1.3	+0.6	+2.3[1]	-1.1

Race/ethnic group and age	Overall performance		Knowledge		Skills		Understanding		Applications	
	Score (1982)	Change (1978-82)	Score (1982)	Change (1978-82)	Score (1982)	Change (1978-82)	Score (1982)	Change (1978-82)	Score (1982)	Change (1978-82)
Total										
9-year olds	56.4%	+1.0%	68.3%	+1.4%	50.6%	+0.8%	41.2%	-0.4%	39.6%	+0.5%
13-year olds	60.5	+3.9[1]	73.8	+4.5[1]	57.6	+4.0[1]	60.5	+3.9[1]	45.6	+2.2[1]
17-year olds	60.2	-0.2	74.9	+0.2	60.0	+0.3	61.5	-0.3	42.4	-1.1
White										
9-year olds	58.8	+0.7	70.8	+1.2	53.1	+0.6	43.4	-0.8	42.4	+0.6
13-year olds	63.1	+3.2[1]	76.1	+3.9[1]	60.4	+3.4[1]	63.6	+3.6[1]	47.9	+1.6[1]
17-year olds	63.1	-0.2	77.3	0.0	63.0	+0.3	64.7	-0.1	45.5	-1.0
Black										
9-year olds	45.2	+2.1	57.8	+3.5[1]	38.7	+1.6	31.4	+0.9	27.0	-0.6
13-year olds	48.2	+6.5[1]	63.8	+8.0[1]	44.0	+6.7[1]	46.4	+5.9[1]	34.8	+4.4[1]
17-year olds	45.0	+1.3	62.6	+3.0	44.2	+1.8	44.8	-0.2	26.0	-0.2
Hispanic										
9-year olds	47.7	+1.1	58.7	0.0	43.8	+2.5	32.4	-0.2	30.5	+0.6
13-year olds	51.9	+6.5[1]	65.3	+6.3[1]	49.2	+7.2[1]	49.7	+5.9[1]	38.8	+6.0[1]
17-year olds	49.4	+0.9	66.1	+2.0	48.4	+0.5	49.7	+0.8	31.4	+0.4

[1]Change is significant at 0.05 level.

SOURCE: Images of Science, Science Assessment and Research Project, University of Minnesota Research and Evaluation Center, June 1983.

TABLE 1-3

CHANGES IN MEAN PERFORMANCE ON THE SCIENCE ASSESSMENT BY SEX AND RACE, 1977-1982

Assessment component	Male			Female		
	9-year olds	13-year olds	17-year olds	9-year olds	13-year olds	17-year olds
Inquiry						
Score (1982)	52.8%	58.5%	70.2%	52.5%	57.6%	69.1%
Change (1977-82)	-1.1%	-0.4%	-2.6%[2]	-0.9%	-0.8%	-2.4%[2]
Science-Technology-Society						
Score	60.5	59.5	68.6	59.4	55.3	65.4
Change	+3.1[2]	+0.9	-1.4	+2.6[2]	+0.3	+0.3
Content						
Score	(1)	54.7	62.7	(1)	50.2	56.9
Change		+0.3	-2.2[2]		-1.0	-1.7[2]
Attitude[3]						
Score	67.7	52.8	49.0	65.1	47.6	46.6
Change	-0.8	-2.2	-0.9	-0.4	-2.6[2]	+2.7[2]

Assessment component	Males						Females					
	White			Black			White			Black		
	9-year olds	13-year olds	17-year olds	9-year olds	13-year olds	17-year olds	9-year olds	13-year olds	17-year olds	9-year olds	13-year olds	17-year olds
Inquiry												
Score (1982)	55.9%	60.4%	72.8%	40.8%	48.8%	58.1%	55.3%	59.7%	71.6%	41.4%	49.3%	56.7
Change (1977-82)	-1.3%	-0.8%	-2.6%[2]	+3.4%	+0.6%	-0.1%	-1.7%	-1.1%	-2.5%[2]	+1.9%	+0.1%	-1.9%
Science-Technology-Society												
Score	62.7	61.5	71.2	50.7	50.1	55.8	61.3	57.4	67.8	51.7	46.8	54.1
Change	+3.0[2]	+0.7	-1.2	+4.4	+1.5	+0.3	+2.2	+0.4	+0.2	+4.3	-0.8	+2.0
Content												
Score	(1)	56.8	65.6	(1)	44.6	47.8	(1)	52.4	59.3	(1)	40.6	44.4
Change		-0.2	-1.7		+2.4	-1.8		-1.2	-1.6		-0.8	-1.3
Attitude[3]												
Score	68.6	52.6	48.0	64.1	53.8	53.8	66.2	47.0	45.4	61.4	50.0	54.5
Change	-1.1	-3.2[2]	-1.3	+1.4	+0.8	-0.4	-0.5	-2.6[2]	+3.0[2]	-0.2	-1.7	+2.0

[1]Not administered at 9-year old level.
[2]Change is significant at the 0.05 level.
[3]For 13- and 17-year olds, "attitude" refers only to "attitudes toward science classes"

SOURCE: Projections of Education Statistics to 1986-87, NCES 78-403; Projections of Education Statistics to 1990-91, NCES 82-402-A; and Digest of Education Statistics 1983-84, NCES 83-407, National Center for Education Statistics

TABLE 1-4

HIGH SCHOOL GRADUATES IN THE UNITED STATES, 1954-55 - 1990-91

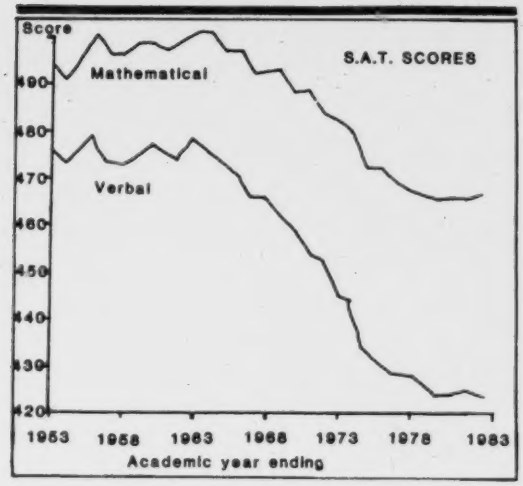
YEAR	Total High School Graduates[1]	SEX	
		Boys	Girls
1954-55	1,351,000	648,000	703,000
1955-56	1,414,800	679,500	735,300
1956-57	1,446,000	696,000	750,000
1957-58	1,505,900	725,500	780,400
1958-59	1,639,000	790,000	849,000
1959-60	1,864,000	898,000	966,000
1960-61	1,971,000	958,000	1,013,000
1961-62	1,925,000	941,000	984,000
1962-63	1,950,000	959,000	991,000
1963-64	2,290,000	1,121,000	1,169,000
1964-65	2,665,000	1,314,000	1,351,000
1965-66	2,632,000	1,308,000	1,324,000
1966-67	2,679,000	1,332,000	1,348,000
1967-68	2,702,000	1,341,000	1,361,000
1968-69	2,829,000	1,402,000	1,427,000
1969-70	2,896,000	1,433,000	1,463,000
1970-71	2,944,000	1,457,000	1,487,000
1971-72	3,008,000	1,490,000	1,518,000
1972-73	3,043,000	1,503,000	1,540,000
1973-74	3,080,000	1,515,000	1,565,000
1974-75	3,140,000	1,545,000	1,595,000
1975-76	3,155,000	1,554,000	1,601,000
1976-77	3,161,000	1,550,000	1,611,000
1977-78	3,134,000	1,534,000	1,600,000
1978-79	3,124,000	1,526,000	1,598,000
1978-79	3,058,000	1,500,000	1,558,000
1980-81	3,026,000	1,485,000	1,541,000
PROJECTED			
1981-82	2,937,000	1,438,000	1,499,000
1982-83	2,795,000	1,368,000	1,427,000
1983-84	2,680,000	1,312,000	1,368,000
1984-85	2,614,000	1,280,000	1,334,000
1985-86	2,599,000	1,273,000	1,326,000
1986-87	2,648,000	1,297,000	1,351,000
1987-88	2,710,000	1,331,000	1,380,000
1988-89	2,626,000	1,289,000	1,337,000
1989-90	2,444,000	1,199,000	1,245,000
1990-91	2,350,000	1,154,000	1,196,000

[1] Includes both public and nonpublic schools.

SOURCE: Admissions Testing Program of the College Examination Entrance Board

TABLE 1-5

SCHOLASTIC APTITUDE TEST SCORES, BY SEX AND RACE/ETHNIC GROUP, 1953 - 1983



SAT SCORE AVERAGES FOR COLLEGE-BOUND SENIORS BY SEX, 1970-83

Year	VERBAL			MATHEMATICS		
	Male	Female	Total	Male	Female	Total
1970	459	461	460	509	465	488
1971	454	457	455	507	466	488
1972	454	452	453	505	461	484
1973	446	443	445	502	460	481
1974	447	442	444	501	459	480
1975	437	431	434	495	449	472
1976	433	430	431	497	446	472
1977	431	427	429	497	445	470
1978	433	425	429	494	444	468
1979	431	423	427	493	443	467
1980	428	420	424	491	443	466
1981	430	418	424	492	443	466
1982	431	421	426	493	443	467
1983	430	420	425	493	445	468

Note: Scores range from 200 to 800.

ETHNIC BACKGROUND (1982-83 SDQ Question 37)

	MALE		FEMALE		TOTAL	
	Number	%	Number	%	Number	%
American Indian	2,198	0.5	2,507	0.5	4,705	0.5
Black	130,862	7.5	46,275	10.0	77,137	8.8
Mexican-American	7,850	1.9	8,684	1.9	16,534	1.9
Oriental	18,540	4.5	18,241	4.0	36,781	4.2
Puerto Rican	4,910	1.2	5,909	1.3	10,819	1.2
White	339,584	82.1	370,426	80.2	710,010	81.1
Other	9,773	2.4	9,716	2.1	19,489	2.2
Number Responding	413,717		461,758		875,475	100.0
Minority Students	74,133	17.9	91,332	19.8	165,465	18.9

S.A.T. SCORES FOR COLLEGE-BOUND SENIORS BY RACE/ETHNIC GROUP, 1976-83

Race/Ethnic Group	1976		1977		1978		1979		1980		1981		1982		1983	
	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math
Total	431	472	429	470	429	468	427	467	424	466	424	466	426	467	425	468
White	451	493	448	489	446	485	444	483	442	482	442	483	444	483		
Black	332	354	330	357	332	354	330	358	330	360	332	362	341	366	339	369
Asian	414	518	405	514	401	510	396	511	396	509	397	513	398	513	395	514
Native American	388	420	390	521	387	419	386	421	390	426	391	425	388	424		
Mexican American	371	410	370	408	370	402	370	410	372	413	373	415	377	416	375	417
Puerto Rican	364	401	355	397	349	388	345	388	350	394	353	398	360	403	458	403
Other	410	458	402	457	399	450	393	447	394	449	388	447	392	449		

Note: Scores range from 200 to 800

SOURCE: "Science and Math Education in American High Schools," National Center for Education Statistics Bulletin, NCES 84-211b

TABLE 1-6

PERCENT OF 1980 AND 1982 HIGH SCHOOL SENIORS WHO TOOK MATH AND SCIENCE COURSES IN GRADES 10 - 12

SUBJECT	Male	Female	Hispanic	Black	American Indian	Asian American	White
General Math	2.8	2.2	3.5	3.0	2.9	5.6	2.2
Pre-Algebra	14.7	14.7	15.4	18.2	17.1	15.3	14.0
Algebra I	61.0	65.2	53.7	53.2	43.9	65.0	66.4
Algebra II	31.4	30.9	18.8	22.2	17.4	44.2	34.4
Advanced Algebra	8.7	7.3	3.0	5.1	1.8	17.0	9.0
Geometry	47.1	49.3	28.4	33.3	23.9	67.5	53.4
Trigonometry	8.5	6.3	4.6	3.6	3.6	15.6	8.3
Other Adv. Math	14.0	12.8	7.0	5.4	4.5	29.5	15.4
Calculus	6.1	5.0	2.4	2.0	2.0	14.8	6.4
Statistics	1.3	1.1	0.3	0.5	0.6	1.8	1.4
Unified Math II & III	1.6	1.2	0.7	0.7	0.9	1.7	1.5
General Science	29.8	28.9	34.0	32.8	30.4	24.0	28.9
Chemistry I	24.7	24.0	12.9	18.6	17.1	40.9	26.8
Advanced Chemistry	4.6	3.2	1.7	2.2	2.1	7.5	4.4
Other Chemistry	7.9	6.6	3.3	5.7	19.8	13.8	7.8
Geology	15.0	12.8	11.9	10.8	8.8	9.2	14.6
Physics I	14.5	8.4	4.9	5.5	7.1	26.8	12.9
Advanced Physics	2.0	0.9	0.5	1.1	0.0	4.9	1.6
Other Physics	5.3	2.1	1.2	1.9	6.0	8.0	4.2
Other Physical Sci.	2.3	1.8	1.4	2.1	0.0	2.0	2.1
Unified Science	29.6	26.3	30.7	33.8	29.9	16.7	26.8
Basic Biology	72.7	76.1	69.1	74.1	65.4	78.1	75.4
Advanced Biology	7.4	9.2	4.6	5.7	6.3	12.8	9.3
Other Biology	0.7	0.8	0.6	1.2	1.0	0.8	0.7
Biochem./Biophysics	0.3	0.1	0.1	0.0	0.4	0.3	0.3
Botany	0.7	0.9	0.4	0.7	0.4	0.6	0.8
Zoology	4.9	7.6	4.8	5.8	1.3	9.6	6.6
Other Life Sci.	4.3	4.8	3.2	4.5	2.1	4.2	4.8

SOURCE: National Center for Education Statistics, unpublished data and Bulletin 84-211b

TABLE 1-7

PERCENT OF HIGH SCHOOL SENIORS WHO TOOK TWO OR MORE YEARS OF SUBJECT COURSES IN GRADES 9-12, SPRING 1980 OR 1982

SUBJECT	TOTAL	BOYS	GIRLS	WHITE	BLACK	HISPANIC	AM. IN.	ASIAN
English & Literature								
2-2.5 years	14.6	15.3	13.8	15.1	10.3	14.6	12.8	19.0
3 or more years	81.0	79.3	82.6	81.0	82.8	76.2	76.6	76.8
History or Social Studies								
2-2.5 years	41.8	40.8	42.7	42.4	38.4	40.0	37.8	46.1
3 or more years	39.1	40.1	38.2	39.2	38.4	34.7	33.4	37.0
Mathematics								
2-2.5 years	32.8	30.6	34.8	32.3	36.0	35.3	28.2	36.0
3 or more years*	46.2	47.5	45.0	49.5	38.5	31.4	28.6	68.1
Science								
2-2.5 years	29.9	29.6	30.1	29.2	32.6	31.7	26.7	32.0
3 or more years	30.4	33.3	27.7	33.7	22.9	16.0	16.0	45.2

*1982

SOURCE: National College Bound Seniors, 1983, Admissions Testing Program of the College Board

TABLE 1-8

NUMBER OF YEARS OF STUDY BY SUBJECT, COLLEGE BOUND SENIORS, 1983 (1982-83 SDQ Questions 6-11)

	English		Mathematics		For. Languages		Bio. Sciences		Phy. Sciences		Soc. Studies	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	%	%	%	%	%	%	%	%	%	%	%	%
No Courses	0.2	0.1	0.2	0.3	15.5	10.4	5.4	4.0	5.7	9.8	0.7	0.5
One Year	1.0	0.8	1.1	1.7	13.7	12.2	62.2	60.8	25.1	36.2	2.1	2.1
Two Years	1.5	1.0	7.1	12.0	36.6	33.9	24.8	27.9	36.7	35.4	16.0	17.1
Three Years	5.3	4.7	20.4	29.1	19.4	21.9	4.9	5.1	25.3	15.3	39.9	42.3
Four Years	83.3	82.4	56.4	47.4	11.8	16.7	1.9	1.6	5.4	2.5	35.6	32.5
Five or More Years	8.7	11.1	14.7	9.6	3.0	4.9	0.7	0.6	1.7	0.7	5.8	5.5
Number Responding	420324	469358	420033	468979	417226	466780	418269	467442	417767	466022	417622	466494
Mean Number Years	3.97	4.02	3.76	3.50	2.07	2.37	1.38	1.41	2.05	1.67	3.25	3.21
Mean Number (Total)	3.99		3.62		2.23		1.40		1.85		3.23	

TABLE 1-9

PERCENT OF COLLEGE BOUND SENIORS INTENDING TO STUDY VARIOUS FIELDS, BY SEX, 1983

Number Responding	407,741 Males	457,594 Females	865,335 Total		
	Male %	Female %	Total %	SAT Verbal Mean	SAT Math Mean
Arts and Humanities	8.6	11.5	10.2	438	454
Architecture/Environmental Design	2.7	0.7	1.6	412	485
Art	2.1	4.6	3.4	405	420
English/Literature	0.9	1.8	1.4	515	490
Foreign Languages	0.3	1.3	0.8	480	481
Music	1.5	1.4	1.4	438	456
Philosophy and Religion	0.5	0.2	0.4	462	487
Theater Arts	0.6	1.5	1.1	443	440
Biological Sciences and Related Areas	14.2	24.2	19.5	432	470
Agricultute	1.7	0.8	1.2	400	435
Biological Sciences	3.1	3.1	3.1	473	508
Forestry/Conservation	0.9	0.2	0.5	417	448
Health and Medical	8.6	20.1	14.7	427	465
Business, Commerce, and Communications	20.3	23.8	22.1	409	445
Business and Commerce	17.0	19.8	18.5	402	445
Communications	3.3	4.0	3.7	445	445
Physical Sciences and Related Areas	37.8	14.5	25.5	438	520
Computer Science/Systems Analysis	11.8	8.5	10.1	413	484
Engineering	22.2	3.9	12.5	448	539
Mathematics	1.1	1.0	1.1	453	572
Physical Sciences	2.7	1.0	1.8	496	560
Social Sciences and Related Areas	12.9	20.3	16.8	436	453
Education	2.0	6.7	4.5	394	418
Ethnic Studies	0.0	0.0	0.0	384	388
Geography	0.1	0.0	0.0	420	457
History and Cultures	0.7	0.4	0.5	490	478
Home Economics	0.1	0.8	0.5	384	408
Library Science	0.0	0.0	0.0	462	435
Military Science	1.4	0.1	0.7	433	473
Psychology	1.4	5.1	3.3	437	449
Social Sciences	7.2	7.1	7.2	461	476
Miscellaneous	6.1	5.8	5.9	421	460
Other	1.0	0.8	0.9	396	428
Trade and Vocational	0.9	0.7	0.8	348	385
Undecided	4.2	4.3	4.2	440	480

SOURCE: 1980 Census of Population, Supplementary Report May 1981, U.S. Department of Commerce and personal communication, U.S. Bureau of the Census; Fall Enrollment in Higher Education, 1982 (Unpublished), National Center for Education Statistics; The American Freshman, National Norms for 1983, ACE/UCLA Cooperative Research Program

TABLE 1-10

MINORITIES IN VARIOUS U. S. POPULATION GROUPS

	U.S. Population 1980		U.S. Population 7/1/82	% of 1983 Freshmen Higher Ed.		Percent of Total Enrollment Fall 1982			
	No. in Thousands	% of Total	No. in Thousands	Men	Women	4-Year University	4-Year Colleges	2-Year Colleges	All Higher Education
Total U.S.	226,505	100.0	231,534	100.0	100.0	100.0	100.0	100.0	100.0
White*	188,341	100.0	198,108	88.0	85.9	84.9	80.9	77.9	80.7
Black	26,488	11.7	27,589	7.8	10.1	5.0	9.8	10.3	8.9
Hispanic	14,606	6.5		1.6	1.6	2.3	3.4	6.1	4.2
Indian/Alaskan Native	1,418	0.6		1.0	1.1	0.4	0.5	1.0	0.7
Asian/Pacific Islander	3,501	1.6		1.7	1.4	2.8	2.4	3.3	2.8
Other Minority**	6,757	3.0		1.8	1.5	4.6	2.9	1.3	2.7

* Non-Hispanic **Includes Nonresident Alien Notes: Totals may not add to 100.0% due to rounding. Except for Data on Full-Time Enrollment, Fall 1982, persons of Spanish origin are also included in racial groups.

SOURCE: Students, Graduates and Dropouts, October 1980-82, Bulletin 2192, December 1983, and unpublished data, Bureau of Labor Statistics

TABLE 1-11

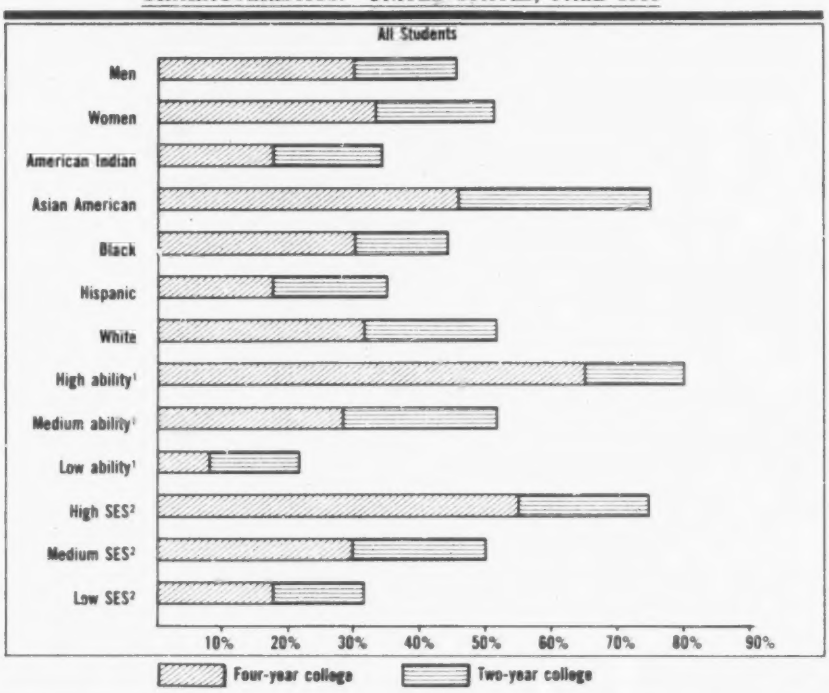
ENROLLMENT STATUS OF PERSONS 16-24 YEARS OLD BY SEX AND RACE/ETHNICITY, 1981-1982

Enrollment Status	1981				1982			
	Total	White	Black	Hispanic	Total	White	Black	Hispanic
TOTAL	**36,946**	**31,109**	**4,933**	**2,685**	**36,452**	**30,491**	**4,985**	**2,598**
ENROLLED	**15,909**	**13,312**	**2,083**	**984**	**15,624**	**13,010**	**2,062**	**955**
Men	8,150	6,853	1,010	517	7,991	6,662	996	499
Women	7,759	6,459	1,072	467	7,633	6,348	1,066	456
16 to 19 Years	11,208	9,285	1,598	752	10,725	8,873	1,519	746
20 to 24 Years	4,701	4,027	485	232	4,897	4,317	544	209
High School	8,108	6,572	1,303	627	7,701	6,206	1,274	605
College	7,800	6,740	780	357	7,923	6,804	788	351
Full-Time Students	6,503	5,613	661	288	6,546	5,624	650	248
Part-Time Students	1,297	1,127	119	69	1,377	1,180	138	103
NOT ENROLLED	**21,037**	**17,797**	**2,850**	**1,701**	**20,828**	**17,481**	**2,923**	**1,643**
Men	10,018	8,562	1,292	816	9,947	8,399	1,341	764
Women	11,019	9,236	1,558	885	10,881	9,082	1,581	879
School Completed								
High School								
Less Than 4 Years	5,142	4,107	913	891	5,055	4,001	917	822
16 to 19 Years	1,921	4,132	684	486	1,891	2,472	318	281
20 to 24 Years	3,222	13,665	2,166	1,215	3,165	1,529	598	542
4 Years Only	11,451	9,778	1,501	634	11,216	9,524	1,523	616
College								
1 to 3 Years	2,926	2,511	348	141	3,024	2,533	407	157
4 Years or More	1,517	1,402	88	36	1,534	1,423	74	46

SOURCE: U.S. Department of Education, National Center for Education Statistics, survey of "High School and Beyond, First Follow-up"

TABLE 1-12

PERCENT OF 1980 HIGH SCHOOL SENIORS ENROLLED IN COLLEGE, BY STUDENT CHARACTERISTICS: UNITED STATES, FALL 1980

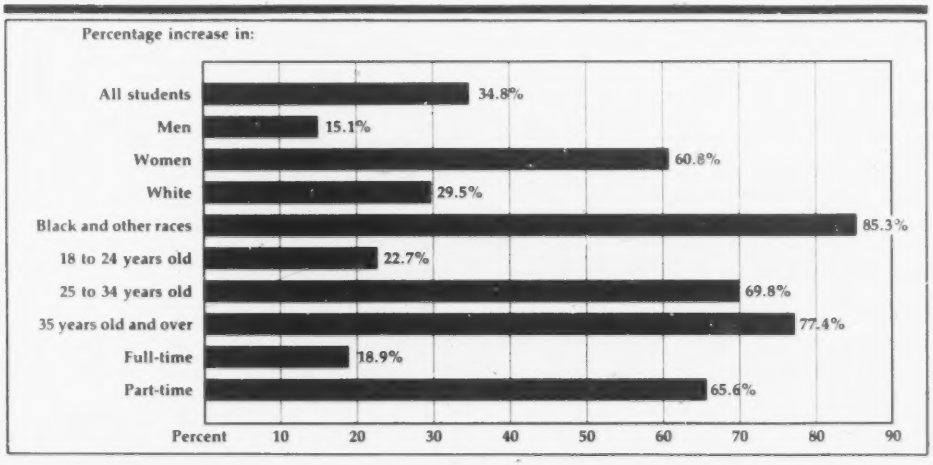


¹Academic ability was measured by performance on a test battery administered as part of the "High School and Beyond" survey.
²Socioeconomic status was measured by a composite score on parental education, family income, father's occupation, and household characteristics.

SOURCE: Bureau of the Census, U.S. Department of Commerce, current population surveys; National Center for Education Statistics, U.S. Department of Education, fall enrollment surveys

TABLE 1-13

PERCENTAGE INCREASES IN THE ENROLLMENT OF COLLEGE STUDENTS WITH SELECTED CHARACTERISTICS: UNITED STATES, FALL 1972 to FALL 1982



SOURCE: The American Freshman: National Norms for Fall 1971 through 1983, Cooperative Institutional Research Program, University of California at Los Angeles and American Council on Education

TABLE 1-14

PERCENTAGE DISTRIBUTION OF FRESHMEN BY PROBABLE MAJOR FIELD OF STUDY IN ALL INSTITUTIONS OF HIGHER EDUCATION, SELECTED YEARS, 1971 - 1983

Probable Major Field of Study	1971		1973		1975		1978		1980		1981		1982		1983	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Agriculture/Forestry	5.4	0.7	4.4	1.0	5.7	1.9	4.5	2.0	4.1	1.8	5.0	2.2	3.8	1.4	2.9	0.9
Arts & Humanities*	16.8	20.5	10.1	15.0	12.7	12.8	7.4	10.6	6.4	10.1	7.4	10.5	6.8	9.7	6.8	9.0
Biological Sciences	4.4	2.7	8.2	5.7	7.1	5.5	4.8	4.4	3.7	3.8	3.9	3.7	3.7	3.8	4.1	3.4
Business	18.3	14.2	21.1	14.0	20.1	17.5	25.0	23.1	22.9	24.5	22.7	25.0	22.3	25.7	22.7	26.0
Education	4.6	15.9	5.2	19.6	4.6	15.5	3.3	12.1	3.3	11.6	2.8	10.8	2.4	9.0	2.9	8.9
Engineering	13.2	0.3	12.1	0.7	14.0	1.3	18.8	2.3	21.0	3.2	21.3	3.2	22.3	3.6	20.6	3.5
Health Professions (Non-M.D.)	2.6	16.1	4.6	16.5	1.8	13.2	2.0	14.6	1.9	13.3	2.0	13.1	1.6	17.8	2.1	14.9
Mathematics/Statistics	2.6	2.9	1.8	1.6	1.1	1.1	1.1	0.8	0.7	0.6	0.6	0.6	0.6	0.7	0.8	0.8
Computer Science							1.6	1.2	2.7	2.4	3.9	3.2	4.9	4.0	5.4	3.7
Physical Sciences	3.1	0.8	4.2	1.1	4.0	1.3	3.5	1.3	3.6	1.6	3.9	1.0	2.6	1.0	2.5	1.0
Premed, Predent, Prevet.							4.0	2.9	3.6	3.2	3.1	2.9	3.2	3.0	3.3	3.2
Social Sciences*	5.6	12.2	5.5	11.7	3.7	8.9	5.0	9.5	4.5	8.6	4.3	7.9	4.2	7.2	4.2	7.6
Other Fields (Technical)	7.3	2.6	8.4	2.0	10.3	6.7	7.0	2.0	8.5	2.9	8.5	3.6	9.7	4.3	9.9	3.8
Other Fields (Non-Technical)	1.4	5.0	7.1	3.5	10.2	8.8	8.1	7.9	9.3	6.9	6.7	6.9	8.2	3.3	8.1	7.1
Undecided	2.3	2.3	4.5	4.9	4.6	5.5	3.9	5.3	3.8	5.5	3.9	5.4	3.7	5.5	4.0	5.7

* Political Science is included in Arts and Humanities through 1975 and in Social Sciences after 1975.

SOURCE: The American Freshman: National Norms for Fall 1977 through 1983, Cooperative Institutional Research Program, University of California at Los Angeles and American Council on Education

TABLE 1-15

PROBABLE CAREER CHOICES OF COLLEGE FRESHMEN, BY SEX (WEIGHTED NATIONAL NORMS), SELECTED YEARS, 1977-1983

	1977		1978		1979		1980		1981		1982		1983	
FIELD	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Accountant	6.7	5.7	6.4	6.2	5.6	5.8	5.4	6.2	4.9	6.1	5.1	6.5	5.0	6.7
Actor/Entertainer	0.8	1.0	0.8	1.0	0.9	1.1	0.9	1.0	0.8	1.0	0.7	1.0	0.8	0.9
Architect	2.6	0.5	2.5	0.5	2.8	0.8	2.8	0.8	2.2	0.5	2.2	0.6	1.9	0.5
Artist	1.4	2.4	1.0	2.1	1.3	2.1	1.4	2.4	1.3	2.2	1.3	2.1	1.5	1.9
Business														
Clerical	0.3	4.9	0.3	4.6	0.4	4.1	0.3	3.9	0.3	3.8	0.3	3.5	0.3	3.6
Executive	10.6	6.1	11.3	7.3	11.6	8.2	11.1	9.2	11.2	9.4	10.8	10.1	11.3	10.0
Owner	4.0	0.8	4.1	1.0	4.5	1.2	4.1	1.3	4.1	1.5	3.9	1.5	4.0	1.5
Salesperson/Buyer	1.1	1.2	1.2	1.3	1.3	1.5	1.1	1.2	1.1	1.2	1.1	1.2	1.1	1.3
Clergy	0.8	0.2	0.8	0.2	0.7	0.1	0.7	0.1	0.7	0.1	0.5	0.1	0.5	0.1
Clinical Psychologist	0.6	1.4	0.5	1.4	0.5	1.6	0.4	1.4	0.4	1.4	0.3	1.4	0.5	1.4
College Teacher	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2
Comp. Progr/Analyst	3.2	2.4	4.0	3.0	4.7	3.3	5.6	4.9	7.5	6.4	9.7	8.0	10.2	7.0
Conserv/Forester	2.9	1.1	1.9	0.8	1.8	0.7	1.4	0.7	1.9	0.7	1.3	0.5	1.1	0.3
Dentist	1.4	0.5	1.4	0.6	1.2	0.6	1.2	0.7	0.9	0.5	0.9	0.5	0.9	0.6
Dietician	0.1	1.1	0.1	1.0	0.1	0.7	0.1	0.7	0.1	0.8	0.1	0.6	0.1	0.5
Engineer	15.1	1.5	16.5	2.2	16.8	2.3	19.1	2.9	19.5	2.9	20.6	3.6	18.8	3.3
Farmer/Rancher	2.0	0.4	1.8	0.5	2.0	0.5	2.0	0.4	2.4	0.6	2.0	0.4	1.4	0.2
Foreign Serv. Worker	0.3	0.7	0.3	0.7	0.3	0.6	0.4	0.6	0.4	0.6	0.4	0.7	0.4	0.7
Homemaker	0.0	0.3	0.0	0.3	0.0	0.4	0.1	0.2	0.0	0.3	0.0	0.2	0.0	0.1
Interior Decorator	0.1	1.1	0.1	1.0	0.1	1.1	0.1	1.0	0.0	1.0	0.1	1.0	0.1	0.8
Interpreter	0.0	0.4	0.1	0.3	0.0	0.3	0.0	0.3	0.0	0.3	0.1	0.3	0.0	0.3
Lab. Tech/Hygienist	0.9	3.3	0.7	3.0	0.6	2.7	0.6	2.3	0.4	1.9	0.5	2.0	0.7	1.9
Law Enforce. Officer	2.4	1.0	2.2	0.9	1.7	0.7	1.8	0.6	1.4	0.4	1.9	0.5	1.8	0.6
Lawyer/Judge	5.5	3.4	5.3	3.4	5.0	3.4	4.8	3.5	4.5	3.4	4.7	3.9	4.2	3.6
Military Career	1.7	0.2	1.8	0.4	1.9	0.3	1.7	0.2	1.8	0.2	1.6	0.2	2.0	0.3
Musician	1.7	1.2	1.6	1.2	1.6	1.1	1.5	0.9	1.5	1.0	1.4	0.9	1.2	0.9
Nurse	0.3	8.8	0.2	7.7	0.2	7.0	0.2	7.2	0.2	7.3	0.2	7.7	0.3	8.4
Optometrist	0.3	0.2	0.3	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
Pharmacist	0.8	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.4	0.5	0.3	0.5	0.5	0.7
Physician	3.9	2.5	4.3	2.8	4.0	2.9	4.1	2.9	4.0	2.9	4.1	3.1	4.5	3.4
School Counselor	0.2	0.4	0.1	0.3	0.1	0.4	0.1	0.3	0.1	0.3	0.1	0.2	0.1	0.3
School Princ/Supt.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scientific Researcher	2.8	1.6	2.7	1.7	2.4	1.3	2.2	1.3	2.0	1.2	1.8	1.2	1.8	1.2
Social/Rec. Worker	0.8	4.5	0.6	3.9	0.6	3.9	0.6	3.2	0.4	2.6	0.3	2.0	0.4	2.1
Statistician	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Therapist	0.5	3.6	0.5	3.4	0.6	3.5	0.6	3.4	0.6	3.6	0.5	3.3	0.7	3.8
Teacher (Elementary)	0.6	7.5	0.4	6.8	0.5	7.0	0.5	6.9	0.4	6.4	0.4	5.5	0.3	5.7
Teacher (Secondary)	2.3	3.5	2.0	3.0	2.1	3.0	1.9	2.4	1.6	2.4	1.4	1.9	1.8	2.1
Veterinarian	1.1	1.6	1.1	1.6	0.9	1.4	0.9	1.5	0.8	1.5	0.8	1.5	0.7	1.3
Writer/Journalist	1.5	2.4	1.4	2.4	1.7	2.7	1.6	2.5	1.7	2.6	1.6	2.6	1.5	2.5
Skilled Trades	3.5	0.4	3.1	0.4	2.7	0.4	3.2	0.5	3.1	0.4	2.9	0.3	2.7	0.4
Other	5.9	8.4	5.7	8.3	6.2	8.9	5.8	8.1	6.1	8.1	5.6	7.5	5.5	7.4
Undecided	8.8	10.7	9.6	11.6	9.4	11.4	8.9	11.3	8.8	11.3	8.1	10.8	8.8	11.3
TOTAL	99.9	100.0	99.8	99.9	100.1	100.1	100.2	99.9	100.0	99.8	100.1	99.9	100.0	100.2

SOURCE: The American Freshman: National Norms for Fall 1971 through 1983, Cooperative Institutional Research Program, University of California at Los Angeles and American Council on Education

TABLE 1-16

RACIAL BACKGROUND OF FRESHMEN IN ALL INSTITUTIONS OF HIGHER EDUCATION, SELECTED YEARS, 1971 - 1983

RACIAL BACKGROUND	1971	1973	1975	1977	1979	1980	1981	1982	1983
WHITE/CAUCASIAN									
Men	92.1	89.1	87.2	87.9	87.2	87.0	89.5	89.0	88.0
Women	90.6	87.9	85.6	86.0	85.4	85.1	87.6	87.5	85.9
BLACK/NEGRO/AFRO-AMERICAN									
Men	5.5	7.0	8.0	7.8	8.2	8.0	7.5	7.6	7.8
Women	7.2	8.6	10.1	9.8	10.1	10.3	9.6	9.4	10.1
AMERICAN INDIAN									
Men	1.0	0.8	0.9	0.8	1.0	0.8	1.1	1.0	1.0
Women	0.9	1.0	0.8	0.7	1.0	0.7	1.0	0.9	1.1
ASIAN AMERICAN/ORIENTAL									
Men	0.5	1.2	1.6	1.2	1.6	1.6	1.2	1.5	1.7
Women	0.4	1.0	1.3	1.0	1.2	1.2	1.0	1.3	1.4
MEXICAN AMERICAN/CHICANO									
Men	1.1	1.3	1.8	1.4	1.1	2.1	0.9	0.9	0.9
Women	1.1	1.2	1.6	1.4	1.2	2.0	0.9	0.9	0.9
PUERTO RICAN/AMERICAN									
Men	0.2	0.5	0.7	0.9	1.1	0.8	0.6	0.9	0.7
Women	0.2	0.4	0.6	1.0	1.0	0.9	0.6	0.9	0.7
OTHER									
Men	1.2	1.5	2.1	1.9	2.2	1.8	1.8	1.5	1.8
Women	1.1	1.5	1.7	1.6	1.8	1.6	1.2	1.3	1.5

SOURCE: Fall Enrollment in Higher Education, Fall 1982, U.S. Department of Education, Office for Civil Rights, Unpublished

TABLE 1-17

PERCENT OF FULL-TIME ENROLLMENT, FALL 1982

	UNDERGRADUATE			GRADUATE			PROFESSIONAL		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
TOTAL U.S.	100.0	50.5	49.5	100.0	58.0	42.0	100.0	68.7	31.3
White (Non-Hispanic)	79.1	40.3	38.7	73.7	40.2	33.6	87.7	61.0	26.7
Black	9.7	4.1	5.6	4.2	1.8	2.4	4.6	2.5	2.1
Hispanic	5.6	2.6	3.0	2.6	1.2	1.3	3.4	2.3	1.1
Indian/Alaskan Native	0.6	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.1
Asian/Pacific Islander	2.6	1.4	1.2	2.7	1.7	1.0	2.9	1.8	1.0
Non Resident Alien	2.7	1.9	0.8	16.5	12.8	3.7	1.1	0.9	0.3

NOTE: Details may not add up to 100.0 because of rounding

SOURCE: National Center for Education Statistics, Unpublished Data

TABLE 1-18

TOTAL ENROLLMENT* IN HIGHER EDUCATION BY RACIAL/ETHNIC CATEGORY, SEX AND CONTROL, FALL 1980 AND 1982

RACIAL/ETHNIC CATEGORY AND SEX	1980			1982			% Change, 1980-1982		
	Total	Public	Private	Total	Public	Private	Total	Public	Private
TOTAL	12,087,625	9,456,423	2,631,202	12,387,868	9,695,116	2,692,752	2.48	2.52	2.34
Men	5,868,738	4,521,632	1,347,106	5,999,243	4,631,933	1,367,310	2.22	2.44	1.50
Women	6,218,887	4,934,791	1,284,096	6,388,625	5,063,183	1,325,442	2.73	2.60	3.22
American Indian/Alaskan Native	85,798	74,224	11,574	87,700	77,370	10,330	2.22	4.24	-10.75
Men	38,968	33,417	5,551	39,887	35,286	4,601	2.36	5.59	-17.11
Women	46,830	40,807	6,023	47,813	42,084	5,729	2.10	3.13	- 4.88
Asian or Pacific Islander	286,408	239,710	46,698	351,001	295,619	55,382	22.55	23.32	18.60
Men	151,260	124,771	26,489	188,981	157,811	31,170	24.94	26.48	17.67
Women	135,148	114,939	20,209	162,020	137,808	24,212	19.88	19.90	19.81
Black, Non-Hispanic	1,106,445	876,070	230,375	1,101,499	873,117	228,382	- 0.45	- 0.34	- 0.87
Men	463,590	365,296	98,294	457,916	360,601	97,315	- 1.22	- 1.43	- 1.00
Women	642,855	510,774	132,081	643,583	512,516	131,067	0.11	0.34	- 0.77
Hispanic	471,686	406,150	65,536	519,250	445,646	73,604	10.08	9.72	12.31
Men	231,590	198,652	32,938	251,771	214,987	36,784	8.71	8.22	11.68
Women	240,096	207,498	32,598	267,479	230,659	36,820	11.41	11.16	12.95
White, Non-Hispanic	9,831,493	7,656,094	2,175,399	9,997,117	7,784,698	2,212,419	1.68	1.68	1.70
Men	4,771,921	3,658,136	1,113,785	4,830,406	3,710,267	1,120,139	1.23	1.43	5.82
Women	5,059,572	3,997,958	1,061,614	5,166,711	4,074,431	1,092,280	2.12	1.92	2.89
Non-Resident Alien	305,795	204,175	101,620	331,301	218,666	112,635	8.34	7.10	10.84
Men	211,409	141,360	70,049	230,282	152,981	77,301	8.93	8.22	10.35
Women	94,386	62,815	31,571	101,019	65,685	35,334	7.03	4.57	11.92

* Excludes those students whose racial/ethnic category was not reported.

TABLE 1-19

TOTAL ENROLLMENT* IN INSTITUTIONS OF HIGHER EDUCATION, BY RACIAL/ETHNIC CATEGORY AND BY TYPE AND CONTROL, FALL 1982

TYPE AND CONTROL OF INSTITUTION	Total Enrollment	RACIAL/ETHNIC CATEGORY					
		American Indian/ Alaskan Native	Asian or Pacific Islander	Black, Non-Hispanic	Hispanic	White, Non-Hispanic	Non-Resident Alien
ALL INSTITUTIONS	12,387,868	87,700	351,001	1,101,499	519,250	9,997,117	331,301
Universities	2,884,455	12,603	80,765	144,307	65,470	2,449,501	131,809
Other 4-year Institutions	4,764,311	25,973	112,334	467,993	163,199	3,856,078	138,714
2-year Institutions	4,739,822	49,124	157,882	489,199	290,581	3,691,538	61,498
PUBLIC INSTITUTIONS	9,695,116	77,370	295,619	873,117	445,646	7,784,698	218,666
Universities	2,152,547	10,624	57,906	99,742	44,184	1,853,299	86,792
Other 4-year Institutions	3,022,916	20,304	82,405	320,985	119,960	2,404,628	74,634
2-year Institutions	4,519,653	46,442	155,308	452,390	281,502	3,526,771	57,240
PRIVATE INSTITUTIONS	2,692,752	10,330	55,382	228,382	73,604	2,212,419	112,635
Universities	731,188	1,979	22,859	44,565	21,286	596,202	44,297
Other 4-year Institutions	1,741,395	5,669	29,949	147,008	43,239	1,451,450	64,080
2-year Institutions	220,169	2,682	2,574	36,809	9,079	164,767	4,258

* Excludes those students whose racial/ethnic category was not reported.

SOURCE: National Center for Education Statistics, Unpublished Data

TABLE 1-20

TOTAL, UNDERGRADUATE, GRADUATE, AND FIRST-PROFESSIONAL ENROLLMENT IN INSTITUTIONS OF HIGHER EDUCATION BY CONTROL AND TYPE OF INSTITUTION, SEX AND ATTENDANCE STATUS OF STUDENT, FALL 1992

CONTROL AND TYPE	TOTAL	MEN		WOMEN	
		FULL-TIME	PART-TIME	FULL-TIME	PART-TIME
TOTAL ENROLLMENT					
ALL INSTITUTIONS	12,425,780	3,752,955	2,278,429	3,467,663	2,926,733
Universities	2,883,735	1,203,798	342,150	971,031	366,756
Other 4-Year	4,770,339	1,618,476	696,798	1,587,488	867,577
2-Year	4,771,706	930,681	1,239,481	909,144	1,692,400
PUBLIC	9,696,087	2,739,928	1,892,960	2,544,164	2,519,035
Universities	2,152,547	903,565	239,688	744,791	264,503
Other 4-Year	3,023,887	985,761	458,383	989,654	590,089
2-Year	4,519,653	850,602	1,194,889	809,719	1,664,443
PRIVATE	2,729,693	1,013,027	385,469	923,499	407,698
Universities	731,188	300,233	102,462	226,240	102,253
Other 4-Year	1,746,452	632,715	238,415	597,834	277,488
2-Year	252,053	80,079	44,592	99,425	27,957
UNDERGRADUATE ENROLLMENT					
ALL INSTITUTIONS	9,620,909	3,213,808	1,446,189	3,102,845	1,858,067
Universities	2,008,557	933,292	134,836	797,491	142,938
Other 4-Year	3,622,825	1,402,206	346,842	1,447,596	426,181
2-Year	3,989,527	878,310	964,511	857,758	1,288,948
PUBLIC	7,676,363	2,415,521	1,281,241	1,544,406	1,674,588
Universities	1,589,183	734,679	108,200	634,749	111,555
Other 4-Year	2,338,490	880,842	250,534	909,657	297,457
2-Year	3,748,690	800,080	922,507	760,527	1,265,576
PRIVATE	1,944,546	798,207	164,948	797,912	183,479
Universities	419,374	198,613	26,636	162,742	31,383
Other 4-Year	1,284,335	521,364	96,308	537,939	128,724
2-Year	240,837	78,230	42,004	97,231	
GRADUATE ENROLLMENT					
ALL INSTITUTIONS	1,089,962	258,712	311,894	187,990	331,366
Universities	547,612	170,228	131,324	117,271	128,789
Other 4-Year	541,788	88,424	180,406	70,694	202,264
2-Year	562	60	164	25	313
PUBLIC	687,110	162,288	178,995	121,695	224,032
Universities	358,673	112,994	81,447	78,199	86,033
Other 4-Year	327,875	49,334	97,384	43,471	137,686
2-Year	562	60	164	25	313
PRIVATE	402,852	96,324	132,899	66,295	107,334
Universities	188,939	57,234	49,877	39,072	42,756
Other 4-Year	213,913	39,090	83,022	27,223	64,578
2-Year	0	0	0	0	0
FIRST-PROFESSIONAL ENROLLMENT					
ALL INSTITUTIONS	278,425	173,941	17,259	78,167	9,058
Universities	132,967	82,366	5,086	42,491	3,024
Other 4-Year	145,458	91,575	12,173	35,676	6,034
PUBLIC	113,456	73,431	2,842	35,407	1,776
Universities	65,782	41,977	1,316	21,639	850
Other 4-Year	47,674	31,454	1,526	13,768	926
PRIVATE	164,969	100,510	14,417	42,760	7,282
Universities	67,185	40,389	3,770	20,852	2,174
Other 4-Year	97,784	60,121	10,647	21,908	5,108

SOURCE: Fall Enrollment in Higher Education, 1982, U.S. Department of Education, Office for Civil Rights, Unpublished

TABLE 1-21

FULL-TIME ENROLLMENT IN SELECTED FIELDS BY SEX AND ETHNICITY, FALL 1982

ENROLLMENT	Total Enrollment		Mathematics		Architecture/ Environ. Design		Life Sciences		Business & Management		Physical Sciences		Engineering		Law	
	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women
Undergraduate																
ALL STUDENTS	9,301,454	4,828,572	64,573	27,991	48,571	15,074	191,342	95,624	1,070,393	489,697	115,765	31,653	449,768	65,621	69	26
White, Non-Hispanic	7,360,638	3,807,161	51,504	22,178	39,152	12,310	148,455	72,070	860,492	382,589	98,150	25,564	354,077	49,913	50	18
Black	883,525	514,804	6,063	2,993	2,362	718	15,344	9,539	96,288	54,262	5,302	2,299	22,752	6,258	4	2
Asian/Pacif. Isl.	254,670	117,629	1,944	867	1,533	529	8,282	3,981	19,850	10,535	3,351	1,130	21,090	3,820	12	6
American Indian	67,040	36,447	243	96	141	36	932	478	4,672	2,322	444	134	1,539	276	1	0
Hispanic	541,711	290,323	2,037	916	2,173	634	13,597	7,477	60,854	31,347	4,394	1,540	18,009	2,880	2	0
Non-Res. Alien	193,870	62,208	2,782	941	3,210	847	4,732	2,079	28,237	8,642	4,124	986	32,301	2,474	0	0
Graduate																
ALL STUDENTS	1,020,148	482,920	11,569	3,648	10,162	3,571	35,911	14,630	197,618	64,781	35,086	7,444	66,847	7,046	28	13
White, Non-Hispanic	822,957	405,220	7,538	2,575	7,576	2,876	29,387	12,032	169,471	56,333	25,702	5,602	40,212	5,155	23	11
Black	50,919	31,308	293	130	365	147	1,018	531	6,891	2,992	520	152	1,019	202	0	0
Asian/Pacif. Isl.	23,709	8,786	425	137	275	109	1,128	476	4,652	1,537	1,165	291	4,200	447	0	0
American Indian	3,369	1,706	23	8	26	8	69	26	515	160	71	16	92	9	0	0
Hispanic	24,189	12,936	140	41	210	63	584	276	3,642	1,259	473	115	818	90	2	0
Non-Res. Alien	95,005	22,964	3,150	757	1,710	368	3,725	1,289	12,447	2,500	7,155	1,268	20,506	1,143	3	2
	PERCENTAGES															
	(V)	(H)	(V)	(H)	(V)	(H)	(V)	(H)	(V)	(H)	(V)	(H)	(V)	(H)	(V)	(H)
Undergraduate																
ALL STUDENTS	100.0	51.9	100.0	43.4	100.0	31.0	100.0	50.0	100.0	45.8	100.0	27.3	100.0	14.6	100.0	37.7
White, Non-Hispanic	79.1	51.7	80.0	43.1	80.6	31.4	77.6	48.6	80.4	44.5	84.8	26.1	78.7	14.1	72.5	36.0
Black	9.5	58.3	9.4	49.4	4.9	30.4	8.0	62.2	9.0	56.4	4.6	43.4	5.1	27.5	5.8	0.5
Asian/Pacif. Isl.	2.7	46.2	3.0	44.6	3.2	34.5	4.3	48.1	1.9	53.1	2.9	33.7	4.7	18.1	17.4	0.5
American Indian	0.7	54.4	0.4	39.5	0.3	25.5	0.5	51.3	0.4	49.7	0.4	30.2	0.3	17.9	1.5	0.0
Hispanic	5.8	53.6	3.2	45.0	4.5	29.2	7.1	55.0	5.7	51.5	3.8	35.1	4.0	16.0	2.9	0.0
Non-Res. Alien	2.1	32.1	4.3	33.8	6.6	26.4	2.5	43.9	2.6	30.6	3.6	23.9	7.2	7.7	0.0	
Graduate																
ALL STUDENTS	100.0	47.3	100.0	31.5	100.0	35.1	100.0	40.7	100.0	32.8	100.0	21.2	100.0	10.5	100.0	46.4
White, Non-Hispanic	80.7	49.2	65.2	34.2	74.6	38.0	81.8	40.9	85.8	33.2	73.3	21.8	60.2	12.8	82.1	47.8
Black	5.0	61.5	2.5	44.4	3.6	40.3	2.8	52.2	3.5	43.4	1.5	29.2	1.5	19.8	0.0	
Asian/Pacific Isl.	2.3	37.1	3.7	32.2	2.7	39.6	3.1	42.2	2.4	33.0	3.3	25.0	6.3	10.6	0.0	
American Indian	0.3	50.6	0.2	34.8	0.3	30.8	0.2	37.7	0.3	31.1	0.2	22.5	0.1	9.8	0.0	
Hispanic	2.4	53.5	1.2	29.3	2.1	30.0	1.6	47.3	1.8	34.6	1.4	24.3	1.2	11.0	7.1	0.0
Non-Res. Alien	9.3	24.2	27.2	24.0	16.8	21.5	10.4	34.6	6.3	20.1	20.4	17.7	30.7	5.6	10.7	66.7

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, 1984

TABLE 1-22

GRADUATE RECORD EXAMINATION (GRE) SCORES BY SEX, RACE AND UNDERGRADUATE MAJOR, 1978-79 AND 1981-82

	All S/E		Physical Science		Mathematical Science		Engineering		Biological Science		Behavioral Science		Social Science	
SEX/RACE	1978-79	1981-82	1978-79	1981-82	1978-79	1981-82	1978-79	1981-82	1978-79	1981-82	1978-79	1981-82	1978-79	1981-82
Men														
Verbal	495	480	514	498	510	489	465	442	485	503	506	498	452	448
Quantitative	575	589	640	635	682	670	661	658	577	581	522	530	501	508
Analytical	515	519	555	546	568	570	525	522	518	530	509	503	473	472
Women														
Verbal	500	493	534	510	498	478	497	492	500	513	509	497	457	449
Quantitative	502	530	600	598	636	631	603	653	528	553	479	484	446	449
Analytical	515	525	564	566	565	571	534	590	526	554	513	511	469	481
White														
Verbal	523	523	541	534	537	538	527	525	521	530	528	523	484	483
Quantitative	557	566	639	633	682	676	675	679	569	581	514	519	496	500
Analytical	547	552	581	580	602	621	587	599	553	565	535	531	506	510
Black														
Verbal	372	374	391	409	364	360	403	416	358	394	386	377	343	345
Quantitative	375	382	462	485	486	487	521	565	381	414	366	358	337	334
Analytical	365	393	406	436	401	414	437	473	359	410	371	386	333	367
Asian														
Verbal	486	484	495	504	476	470	459	462	494	505	503	497	453	454
Quantitative	592	606	658	651	660	670	675	676	596	596	528	534	494	511
Analytical	524	537	546	550	549	571	533	550	537	545	510	519	464	477
Native American														
Verbal	472	473	482	491	494	455	478	482	447	488	483	480	451	422
Quantitative	476	492	581	597	671	595	570	649	479	536	457	448	443	424
Analytical	471	490	523	551	553	532	505	567	456	521	468	466	455	454
Mexican American														
Verbal		441	509	465	420	450	434	476	407	459	446	440	409	401
Quantitative		466	600	558	595	601	595	628	448	516	427	422	413	403
Analytical		458	516	508	467	524	487	536	421	478	435	439	404	426
Puerto Rican														
Verbal		391	418	382	375	377	390	411	398	382	399	404	363	359
Quantitative		444	532	520	550	519	583	604	450	444	387	397	378	365
Analytical		417	433	432	412	429	439	473	401	410	382	407	362	392
Latin American														
Verbal		472	509	476	468	482	476	475	473	499	481	473	465	424
Quantitative		500	592	584	626	636	624	629	509	521	460	458	429	422
Analytical		481	524	523	530	524	520	531	484	504	473	463	448	424

Note: Scores range from 200 to 800.

SOURCE: Graduate Science Education, Student Support and Postdoctorals, Detailed Statistical Tables, Fall 1980 (NSF 81-330), and Fall 1982 (in press), National Science Foundation

TABLE 1-23

TOTAL GRADUATE ENROLLMENTS IN SCIENCE AND ENGINEERING BY LEVEL OF DEPARTMENT, 1980 AND 1982

FIELD	FALL 1980						FALL 1982					
	ALL GRAD DEPTS.		Ph.D. DEPTS.		MASTER'S DEPTS.		ALL GRAD DEPTS.		Ph.D. DEPTS.		MASTER'S DEPTS.	
	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W
Total S/E Fields	383,210	34.9	333,658	33.6	49,552	43.6	399,682	36.7	347,414	35.3	52,268	46.1
Engineering	77,174	9.0	72,271	9.1	4,903	7.3	86,789	10.9	80,462	10.9	6,327	10.0
Physical Science	27,063	17.1	25,443	16.6	1,620	25.0	28,205	20.4	26,518	18.6	1,687	29.6
Environ. Science	13,680	22.8	12,349	22.6	1,331	25.1	14,916	27.7	13,469	24.8	1,447	27.0
Math Science	28,873	24.9	24,951	23.8	3,922	31.4	37,021	28.2	30,428	27.1	6,593	33.2
Agric. Science	12,365	23.0	11,644	23.4	721	72.1	12,517	25.8	11,794	24.6	723	19.8
Biological Sci.	47,643	38.8	42,055	38.2	5,588	42.9	46,550	46.3	41,985	41.1	4,565	47.9
Health Science	42,693	71.0	36,953	70.3	5,740	75.2	44,449	74.3	37,565	73.8	6,884	77.1
Psychology	40,544	53.2	29,339	51.6	11,205	62.0	40,205	79.8	29,073	55.6	11,132	63.3
Social Science	93,175	41.7	78,653	41.7	14,522	41.6	89,028	51.4	76,120	43.9	12,908	44.1

SOURCE: Graduate Science Education Student Support and Postdoctorals, Fall 1982, National Science Foundation

TABLE 1-24

FULL-TIME SCIENCE/ENGINEERING GRAUDATE STUDENTS IN ALL INSTITUTIONS BY FIELD, LEVEL OF STUDY, CITIZENSHIP, SEX, AND TYPE OF CONTROL: 1982

FIELD	TOTAL	LEVEL OF STUDY		CITIZENSHIP		SEX		TYPE OF CONTROL	
		FIRST YEAR	BEYOND FIRST YEAR	U.S.	FOREIGN	MEN	WOMEN	PUBLIC	PRIVATE
TOTAL, ALL FIELDS	255,959	84,750	171,209	197,932	58,027	167,270	88,689	182,631	73,328
ENGINEERING	50,576	18,374	32,202	29,028	21,548	45,115	5,461	34,999	15,577
AEROSPACE	1,522	532	990	945	577	1,449	73	1,091	431
AGRICULTURAL	739	248	491	398	341	689	50	686	53
BIOMEDICAL	931	350	581	732	199	751	180	548	383
CHEMICAL	5,608	1,879	3,729	3,267	2,341	4,936	672	3,835	1,773
CIVIL	9,809	3,675	6,134	5,729	4,080	8,415	1,394	7,154	2,655
ELECTRICAL	11,533	4,466	7,067	6,421	5,112	10,715	818	7,516	4,017
ENGINEERING SCIENCE	1,364	403	961	894	470	1,229	135	809	555
INDUSTRIAL	4,057	1,451	2,606	2,362	1,695	3,243	814	2,933	1,124
MECHANICAL	7,364	2,763	4,601	3,853	3,511	6,929	435	5,194	2,170
METALLURGICAL/MATERIALS	2,478	653	1,825	1,297	1,181	2,170	308	1,548	930
MINING	373	116	257	251	122	338	35	309	64
NUCLEAR	1,042	331	711	569	473	969	73	815	227
PETROLEUM	476	176	300	216	260	443	33	285	191
ENGINEERING, N.E.C.	3,280	1,331	1,949	2,094	1,186	2,839	441	2,276	1,004
PHYSICAL SCIENCES	24,071	6,191	17,880	17,585	6,488	19,667	4,404	17,356	6,715
ASTRONOMY	590	146	444	488	102	496	94	382	208
CHEMISTRY	14,308	3,763	10,545	11,087	3,221	10,952	3,356	10,614	3,694
PHYSICS	9,080	2,260	6,820	5,925	3,155	8,153	927	6,267	2,813
PHYSICAL SCIENCES, N.E.C.	93	22	71	83	10	66	27	93	0
ENVIRONMENTAL SCIENCES	11,331	3,644	7,687	9,713	1,618	8,525	2,806	9,361	1,970
ATMOSPHERIC SCIENCES	813	244	569	625	188	689	124	722	91
GEOSCIENCES	7,455	2,436	5,019	6,547	908	5,686	1,769	6,030	1,425
OCEANOGRAPHY	1,593	410	1,183	1,253	340	1,149	444	1,337	256
ENVIRONMENTAL SCIENCES, N.E.C.	1,470	554	916	1,288	182	1,001	469	1,272	198
MATHEMATICAL/COMPUTER SCIENCES	20,050	7,057	12,993	13,016	7,034	14,960	5,090	14,567	5,483
COMPUTER SCIENCE	9,365	3,424	5,941	6,166	3,197	7,039	2,326	6,512	2,853
MATHEMATICS AND APPLIED MATHEMATICS	9,108	3,149	5,949	6,016	3,092	6,798	2,310	6,697	2,411
STATISTICS	1,577	474	1,103	832	745	1,123	454	1,358	219
LIFE SCIENCES	70,676	23,142	47,534	60,885	9,791	37,132	33,544	54,638	16,038
AGRICULTURAL SCIENCES	10,050	2,974	7,076	7,636	2,414	7,556	2,494	9,734	316
BIOLOGICAL SCIENCES	37,024	9,649	27,375	32,009	5,015	22,329	14,695	27,623	9,401
ANATOMY	969	226	743	880	89	599	370	603	366
BIOCHEMISTRY	3,820	937	2,883	3,155	665	2,479	1,341	2,580	1,240
BIOLOGY	9,192	2,645	6,547	8,322	870	5,594	3,598	6,448	2,744
BIOMETRY/EPIDEMIOLOGY	923	272	651	772	151	454	469	485	438
BIOPHYSICS	425	104	321	355	70	318	107	235	190
BOTANY	3,131	787	2,344	2,552	579	1,998	1,133	2,877	254
CELL BIOLOGY	1,029	202	827	934	95	650	379	557	472
ECOLOGY	892	184	708	812	80	588	304	844	48
ENTOMOLOGY/PARASITOLOGY	1,340	283	1,057	1,113	227	1,021	319	1,291	49
GENETICS	907	239	668	793	114	430	477	650	257
MICROBIOLOGY	3 665	927	2,738	3,197	468	2,084	1,581	2,726	939
NUTRITION	3,114	946	2,168	2,305	809	1,152	1,962	2,442	672
PATHOLOGY	1,087	266	821	918	169	668	419	752	335
PHARMACOLOGY	1,946	433	1,513	1,702	244	1,271	675	1,324	622
PHYSIOLOGY	1,808	519	1,289	1,620	188	1,205	603	1,226	582
ZOOLOGY	2,155	486	1,669	2,020	135	1,449	706	2,022	133
BIOSCIENCES, N.E.C.	621	193	428	559	62	369	252	561	60
HEALTH SCIENCES	23,602	10,519	13,083	21,240	2,362	7,247	16,355	17,281	6,321
ANESTHESIOLOGY	21	7	14	19	2	8	13	20	1
CANCER/ONCOLOGY	55	11	44	55	0	39	16	55	0
CARDIOLOGY	28	25	3	28	0	16	12	0	28
DENTISTRY	808	297	511	651	157	657	151	567	241
ENDOCRINOLOGY	51	10	41	44	7	20	31	50	1
GASTROENTEROLOGY	7	4	3	7	0	6	1	1	6
HEMATOLOGY	6	3	3	6	0	1	5	6	0
NEUROLOGY	325	65	260	306	19	213	112	171	154
NURSING	6,662	3,078	3,584	6,460	202	378	6,284	4,830	1,832
OBSTETRICS/GYNECOLOGY	20	9	11	10	10	8	12	7	13
OPHTHALMOLOGY	19	2	17	15	4	16	3	15	4
OTORHINOLARYNGOLOGY	16	8	8	16	0	13	3	13	3
PEDIATRICS	144	58	86	125	19	68	76	97	47
PHARMACEUTICAL SCIENCES	1,709	455	1,254	1,121	588	1,197	512	1,460	249
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	4,051	2,212	1,839	3,354	697	1,840	2,211	2,705	1,346
PSYCHIATRY	72	12	60	66	6	38	34	59	13
PULMONARY DISEASE	12	6	6	11	1	9	3	10	2
RADIOLOGY	211	67	144	172	39	157	54	134	77
SPEECH PATHOLOGY/AUDIOLOGY	5,449	2,478	2,971	5,235	214	818	4,631	4,561	888
SURGERY	90	36	54	71	19	78	12	65	25
VETERINARY SCIENCES	390	103	287	290	100	247	143	316	74
CLINICAL MEDICINE, N.E.C.	367	133	234	307	60	196	171	240	127
HEALTH RELATED, N.E.C.	3,089	1,440	1,649	2,871	218	1,224	1,865	1,899	1,190
PSYCHOLOGY	25,883	7,603	18,280	24,789	1,094	11,267	14,616	15,661	10,222
SOCIAL SCIENCES	53,372	18,739	34,633	42,918	10,454	30,604	22,768	36,049	17,323
AGRICULTURAL ECONOMICS	1,950	620	1,330	1,248	702	1,558	392	1,858	92
ANTHROPOLOGY	4,105	917	3,188	3,719	386	1,903	2,202	2,884	1,221
ECONOMICS (EXCEPT AGRICULTURAL)	9,548	3,115	6,433	5,963	3,585	7,282	2,266	6,204	3,344
GEOGRAPHY	2,201	729	1,472	1,804	397	1,541	660	2,003	198
HISTORY AND PHILOSOPHY OF SCIENCE	223	53	170	188	35	149	74	122	101
LINGUISTICS	2,139	651	1,488	1,430	709	943	1,196	1,507	632
POLITICAL SCIENCE	13,681	5,352	8,329	11,140	2,541	9,142	4,539	7,792	5,889
SOCIOLOGY	5,062	1,318	3,744	4,060	1,002	2,428	2,634	3,610	1,452
SOCIOLOGY/ANTHROPOLOGY	647	223	424	518	129	324	323	457	190
SOCIAL SCIENCES, N.E.C.	13,816	5,761	8,055	12,848	968	5,334	8,482	9,612	4,204

SOURCE: Graduate Science Education Student Support and Postdoctorals, Fall 1982, National Science Foundation

TABLE 1-25

FULL-TIME SCIENCE & ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS, BY FIELD, CITIZENSHIP, AND RACE/ETHNICITY, 1982

FIELD	TOTAL	U.S. CITIZENS						FOREIGN
		BLACK NON-HISPANIC	AMERICAN INDIAN/ ALASKAN NATIVE	ASIAN/ PACIFIC ISLANDER	HISPANIC	WHITE NON-HISPANIC	OTHER OR UNKNOWN	
TOTAL, ALL FIELDS	255,959	7,219	724	5,663	5,507	159,351	19,468	58,027
ENGINEERING	50,576	543	77	1,425	605	21,796	4,582	21,548
AEROSPACE	1,522	9	0	30	19	659	228	577
AGRICULTURAL	739	5	0	11	7	372	3	341
BIOMEDICAL	931	12	1	25	11	660	23	199
CHEMICAL	5,608	60	9	219	63	2,650	266	2,341
CIVIL	9,809	74	6	217	131	4,463	838	4,080
ELECTRICAL	11,533	144	35	347	143	4,590	1,162	5,112
ENGINEERING SCIENCE	1,364	11	1	33	10	611	228	470
INDUSTRIAL	4,057	85	4	126	90	1,807	250	1,695
MECHANICAL	7,364	58	3	181	70	2,546	995	3,511
METALLURGICAL/MATERIALS	2,478	16	1	65	21	1,134	60	1,181
MINING	373	2	0	14	6	201	28	122
NUCLEAR	1,042	12	1	23	10	500	23	473
PETROLEUM	476	4	0	9	1	198	4	260
ENGINEERING, N.E.C.	3,280	51	16	125	23	1,405	474	1,186
PHYSICAL SCIENCES	24,071	417	32	533	387	14,762	1,452	6,488
ASTRONOMY	590	6	2	1	5	454	20	102
CHEMISTRY	14,308	321	20	371	279	9,125	971	3,221
PHYSICS	9,080	88	10	156	101	5,115	455	3,155
PHYSICAL SCIENCES, N.E.C.	93	2	0	5	2	68	6	10
ENVIRONMENTAL SCIENCES	11,331	72	18	133	128	8,366	996	1,618
ATMOSPHERIC SCIENCES	813	3	1	12	5	593	11	188
GEOSCIENCES	7,455	40	11	78	58	5,664	696	908
OCEANOGRAPHY	1,593	9	1	29	61	1,047	106	340
ENVIRONMENTAL SCIENCES, N.E.C.	1,470	20	5	14	4	1,062	183	182
MATHEMATICAL/COMPUTER SCIENCES	20,050	363	43	663	280	9,924	1,743	7,034
COMPUTER SCIENCE	9,365	189	23	364	105	4,446	1,041	3,197
MATHEMATICS AND APPLIED MATHEMATICS	9,108	158	16	278	162	4,717	685	3,092
STATISTICS	1,577	16	4	21	13	761	17	745
LIFE SCIENCES	70,676	1,728	192	1,627	1,341	51,976	4,021	9,791
AGRICULTURAL SCIENCES	10,050	126	12	117	164	6,578	639	2,414
BIOLOGICAL SCIENCES	37,024	787	68	906	614	27,713	1,922	6,015
ANATOMY	969	17	1	17	13	778	54	89
BIOCHEMISTRY	3,820	62	4	114	61	2,816	96	665
BIOLOGY	9,192	309	27	196	268	6,979	548	870
BIOMETRY/EPIDEMIOLOGY	923	37	6	30	7	692	0	151
BIOPHYSICS	425	4	0	18	3	334	1	70
BOTANY	3,131	26	3	50	32	2,269	172	579
CELL BIOLOGY	1,029	10	4	31	8	859	22	96
ECOLOGY	892	4	0	8	8	649	143	80
ENTOMOLOGY/PARASITOLOGY	1,340	12	0	22	18	950	111	227
GENETICS	907	26	1	33	15	709	9	114
MICROBIOLOGY	3,665	61	6	200	49	2,729	253	468
NUTRITION	3,114	65	5	84	40	1,947	164	809
PATHOLOGY	1,087	17	3	37	14	821	26	169
PHARMACOLOGY	1,946	30	4	69	28	1,502	79	244
PHYSIOLOGY	1,808	36	5	61	22	1,485	31	188
ZOOLOGY	2,155	47	3	42	19	1,774	135	135
BIOSCIENCES, N.E.C.	621	24	0	28	9	420	78	62
HEALTH SCIENCES	23,602	815	112	605	563	17,685	1,460	2,362
ANESTHESIOLOGY	21	0	0	0	0	16	3	2
CANCER/ONCOLOGY	55	1	0	1	1	52	0	0
CARDIOLOGY	28	0	0	0	0	25	3	0
DENTISTRY	808	8	4	11	14	587	27	157
ENDOCRINOLOGY	51	4	0	1	1	37	1	7
GASTROENTEROLOGY	7	1	0	1	0	2	3	0
HEMATOLOGY	6	0	0	0	0	6	0	0
NEUROLOGY	325	1	0	12	2	268	23	19
NURSING	6,663	225	20	118	61	5,476	560	202
OBSTETRICS/GYNECOLOGY	20	2	0	1	0	7	0	10
OPHTHALMOLOGY	19	0	0	1	0	4	10	4
OTORHINOLARYNGOLOGY	16	0	0	0	0	16	0	0
PEDIATRICS	144	11	1	5	2	105	1	19
PHARMACEUTICAL SCIENCES	1,709	29	2	66	15	985	24	588
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	4,051	169	39	219	229	2,571	127	697
PSYCHIATRY	72	8	0	3	6	42	7	6
PULMONARY DISEASE	12	1	0	0	0	8	2	1
RADIOLOGY	211	2	1	10	2	156	1	39
SPEECH PATHOLOGY/AUDIOLOGY	5,449	204	28	83	132	4,314	474	214
SURGERY	90	1	0	0	0	70	0	19
VETERINARY SCIENCES	390	21	0	5	1	263	0	100
CLINICAL MEDICINE, N.E.C.	367	11	2	13	7	264	10	60
HEALTH RELATED, N.E.C.	3,089	116	15	55	90	2,411	184	218
PSYCHOLOGY	25,883	1,030	78	321	1,038	19,236	3,089	1,094
SOCIAL SCIENCES	53,372	3,066	287	961	1,728	33,291	3,585	10,454
AGRICULTURAL ECONOMICS	1,950	44	5	20	39	1,125	15	702
ANTHROPOLOGY	4,105	56	21	43	98	3,155	346	386
ECONOMICS (EXCEPT AGRICULTURAL)	9,548	245	21	245	182	4,813	457	3,585
GEOGRAPHY	2,201	36	4	22	35	1,606	101	397
HISTORY AND PHILOSOPHY OF SCIENCE	223	2	1	1	2	180	2	35
LINGUISTICS	2,139	20	9	37	42	1,135	192	709
POLITICAL SCIENCE	13,681	1,002	91	288	511	8,040	1,291	2,541
SOCIOLOGY	5,062	358	33	109	214	3,186	160	1,002
SOCIOLOGY/ANTHROPOLOGY	447	95	4	8	11	395	8	129
SOCIAL SCIENCES, N.E.C.	13,816	1,208	98	279	594	9,656	1,013	968

SOURCE: Graduate Science Education Student Support and Postdoctorals, Fall 1982, National Science Foundation

TABLE 1-26

FULL-TIME SCIENCE & ENGINEERING GRADUATE STUDENTS IN DOCTORATE GRANTING INSTITUTIONS BY FIELD, CITIZENSHIP AND RACE/ETHNICITY, 1982

FIELD	TOTAL	U.S. CITIZENS						FOREIGN
		BLACK NON-HISPANIC	AMERICAN INDIAN ALASKAN NATIVE	ASIAN PACIFIC ISLANDER	HISPANIC	WHITE NON-HISPANIC	OTHER OR UNKNOWN	
TOTAL, ALL FIELDS	237,676	5,968	625	5,246	5,062	148,350	16,982	55,443
ENGINEERING	49,106	500	72	1,345	580	21,306	4,345	20,958
AEROSPACE	1,519	9	0	30	19	658	228	575
AGRICULTURAL	739	5	0	11	7	372	3	341
BIOMEDICAL	908	12	1	25	11	656	4	199
CHEMICAL	5,546	60	9	211	61	2,617	266	2,322
CIVIL	9,513	72	5	200	126	4,379	760	3,972
ELECTRICAL	11,293	135	34	342	136	4,543	1,077	5,026
ENGINEERING SCIENCE	1,339	11	1	29	10	599	223	466
INDUSTRIAL	3,816	70	3	110	87	1,703	244	1,599
MECHANICAL	7,224	96	3	171	66	2,502	973	3,455
METALLURGICAL/MATERIALS	2,453	16	1	64	21	1,118	60	1,173
MINING	351	2	0	14	6	184	28	117
NUCLEAR	1,042	12	1	23	10	500	23	473
PETROLEUM	470	4	0	9	1	196	4	256
ENGINEERING, N.E.C.	2,893	36	14	106	20	1,279	452	986
PHYSICAL SCIENCES	23,365	339	29	503	376	14,437	1,378	6,303
ASTRONOMY	590	6	2	3	5	464	20	102
CHEMISTRY	13,767	256	17	345	271	8,879	910	3,089
PHYSICS	8,955	77	10	154	99	5,061	447	3,107
PHYSICAL SCIENCES, N.E.C.	53	0	0	3	1	43	1	5
ENVIRONMENTAL SCIENCES	10,747	57	15	124	110	7,956	914	1,573
ATMOSPHERIC SCIENCES	805	3	0	12	5	587	11	187
GEOSCIENCES	7,219	37	11	76	43	5,484	670	898
OCEANOGRAPHY	1,551	9	1	29	60	1,008	106	338
ENVIRONMENTAL SCIENCES, N.E.C.	1,172	8	3	7	2	875	127	150
MATHEMATICAL/COMPUTER SCIENCES	18,181	253	30	557	250	9,101	1,508	6,482
COMPUTER SCIENCE	8,168	110	14	283	88	3,972	885	2,814
MATHEMATICS AND APPLIED MATHEMATICS	8,451	127	10	253	150	4,374	614	2,923
STATISTICS	1,562	16	4	21	12	755	9	745
LIFE SCIENCES	66,094	1,431	171	1,567	1,253	48,760	3,565	9,347
AGRICULTURAL SCIENCES	9,675	108	11	114	159	8,402	587	2,294
BIOLOGICAL SCIENCES	35,212	636	59	875	580	26,434	1,789	4,839
ANATOMY	969	17	1	17	13	778	54	89
BIOCHEMISTRY	3,802	62	6	114	61	2,802	96	661
BIOLOGY	7,732	171	16	173	242	5,953	432	746
BIOMETRY/EPIDEMIOLOGY	923	37	6	30	7	692	0	151
BIOPHYSICS	425	4	0	13	3	334	1	70
BOTANY	3,118	26	3	50	32	2,256	172	579
CELL BIOLOGY	1,029	10	4	31	8	859	22	95
ECOLOGY	887	4	0	8	8	644	143	80
ENTOMOLOGY/PARASITOLOGY	1,340	12	0	22	18	950	111	227
GENETICS	860	24	1	33	13	669	9	111
MICROBIOLOGY	3,641	61	5	100	49	2,718	246	462
NUTRITION	1,020	54	3	79	39	1,893	163	789
PATHOLOGY	1,015	17	2	35	12	770	18	161
PHARMACOLOGY	1,945	30	4	59	28	1,501	79	244
PHYSIOLOGY	1,808	36	5	61	22	1,485	31	188
ZOOLOGY	2,137	47	3	42	19	1,758	135	133
BIOSCIENCES, N.E.C.	961	24	0	28	6	372	77	54
HEALTH SCIENCES	21,207	687	101	578	514	15,924	1,189	2,214
ANESTHESIOLOGY	21	0	0	0	0	16	3	2
CANCER/ONCOLOGY	55	1	0	1	1	52	0	0
CARDIOLOGY	3	0	0	0	0	0	3	0
DENTISTRY	808	8	4	11	14	587	27	157
ENDOCRINOLOGY	51	4	0	1	1	37	1	7
GASTROENTEROLOGY	7	1	0	1	0	2	3	0
HEMATOLOGY	6	0	0	0	0	6	0	0
NEUROLOGY	311	1	0	12	2	256	23	17
NURSING	6,232	188	19	112	55	5,167	494	197
OBSTETRICS/GYNECOLOGY	20	2	0	1	0	7	0	10
OPHTHALMOLOGY	19	0	0	1	0	4	10	4
OTORHINOLARYNGOLOGY	16	0	0	0	0	16	0	0
PEDIATRICS	144	11	1	5	2	105	1	19
PHARMACEUTICAL SCIENCES	1,696	29	2	66	15	979	23	582
PREVENTIVE MEDICINE COMMUNITY HEALTH	4,023	169	39	219	229	2,567	105	695
PSYCHIATRY	72	8	0	3	6	42	7	6
PULMONARY DISEASE	12	1	0	0	0	8	2	1
RADIOLOGY	211	2	1	10	2	154	1	39
SPEECH PATHOLOGY/AUDIOLOGY	4,493	154	20	72	110	3,543	406	188
SURGERY	90	1	0	0	0	70	0	19
VETERINARY SCIENCES	368	7	0	5	1	263	0	92
CLINICAL MEDICINE, N.E.C.	298	6	2	12	4	224	4	46
HEALTH RELATED, N.E.C.	2,251	94	13	46	72	1,817	74	133
PSYCHOLOGY	21,144	801	53	276	966	15,604	2,568	898
SOCIAL SCIENCES	49,039	2,587	255	874	1,549	31,188	2,704	9,882
AGRICULTURAL ECONOMICS	1,928	37	5	20	39	1,122	15	690
ANTHROPOLOGY	4,027	55	21	42	97	3,106	327	379
ECONOMICS (EXCEPT AGRICULTURAL)	9,151	191	17	238	170	4,735	410	3,390
GEOGRAPHY	2,035	28	3	17	34	1,486	86	381
HISTORY AND PHILOSOPHY OF SCIENCE	223	2	1	1	2	180	2	35
LINGUISTICS	2,127	20	9	32	41	1,129	188	708
POLITICAL SCIENCE	12,086	809	81	169	440	7,280	980	2,347
SOCIOLOGY	4,820	304	30	99	198	3,070	139	980
SOCIOLOGY/ANTHROPOLOGY	602	82	3	5	10	367	8	127
SOCIAL SCIENCES, N.E.C.	12,040	1,059	85	251	518	8,713	569	845

SOURCE: Graduate Science Education Student Support and Postdoctorals, Fall 1982, National Science Foundation.

TABLE 1-27

FOREIGN FULL-TIME SCIENCE & ENGINEERING GRADUATE STUDENTS IN DOCTORATE GRANTING INSTITUTIONS BY FIELD, 1975-77 AND 1979-82

FIELD	NUMBER							AVERAGE ANNUAL PERCENT CHANGE		
	1975	1976	1977	1979	1980	1981	1982	1975-81	1981-82	1975-82
TOTAL, ALL FIELDS	33,128	34,469	36,856	44,750	48,735	52,673	55,443	8.0	5.3	7.6
ENGINEERING	11,887	12,271	13,398	16,272	17,625	19,349	20,958	8.5	8.3	8.4
AEROSPACE	394	440	473	520	565	598	575	7.2	-3.8	5.5
AGRICULTURAL	192	248	285	274	293	298	341	7.6	14.4	8.6
BIOMEDICAL	111	103	116	131	135	157	199	5.9	26.8	8.7
CHEMICAL	1,413	1,537	1,586	1,836	1,960	2,178	2,222	7.5	6.6	7.4
CIVIL	2,040	1,941	2,336	3,054	3,297	3,618	3,972	10.0	9.8	10.0
ELECTRICAL	2,597	2,719	3,012	3,758	4,182	4,651	5,024	10.2	8.0	9.9
ENGINEERING SCIENCE	322	297	359	327	373	394	466	3.0	21.4	5.4
INDUSTRIAL	1,163	1,078	1,236	1,411	1,438	1,565	1,599	5.1	2.2	4.7
MECHANICAL	1,707	1,804	1,868	2,400	2,593	3,020	3,455	10.0	14.4	10.6
METALLURGICAL/MATERIALS	711	728	743	1,018	1,100	1,106	1,173	7.6	6.1	7.4
MINING	147	146	153	112	136	150	117	.3	-22.0	-3.2
NUCLEAR	400	384	387	444	443	427	473	1.1	10.8	2.4
PETROLEUM	154	224	201	231	210	192	256	3.7	33.3	7.5
ENGINEERING, N.E.C.	536	404	623	756	900	1,005	986	11.0	-1.9	9.1
PHYSICAL SCIENCES	4,391	4,427	4,572	5,170	5,589	6,079	6,303	5.6	3.7	5.3
ASTRONOMY	67	68	70	75	84	93	102	5.6	9.7	6.2
CHEMISTRY	2,352	2,446	2,488	2,745	2,869	3,066	3,089	4.5	.8	4.0
PHYSICS	1,946	1,888	2,004	2,345	2,628	2,913	3,107	6.8	6.7	6.8
PHYSICAL SCIENCES, N.E.C.	6	5	10	5	8	7	5	2.6	-28.6	-2.6
ENVIRONMENTAL SCIENCES	870	955	1,056	1,214	1,312	1,436	1,573	8.7	9.5	8.8
ATMOSPHERIC SCIENCES	121	134	129	156	145	179	187	6.7	4.5	6.4
GEOSCIENCES	545	605	686	726	802	869	898	8.1	3.3	7.4
OCEANOGRAPHY	130	143	150	185	208	245	338	11.1	38.0	14.6
ENVIRONMENTAL SCIENCES, N.E.C.	74	73	91	147	157	143	150	11.6	4.9	10.6
MATHEMATICAL/COMPUTER SCIENCES	2,807	3,172	3,376	4,329	5,024	5,728	6,482	12.6	13.2	12.7
COMPUTER SCIENCE	946	1,011	1,028	1,581	1,910	2,262	2,814	15.7	24.4	16.9
MATHEMATICS AND APPLIED MATHEMATICS	1,425	1,668	1,816	2,152	2,488	2,767	2,923	11.7	5.6	10.8
STATISTICS	438	493	532	596	626	699	745	8.1	6.6	7.9
LIFE SCIENCES	6,484	6,719	6,867	8,187	8,496	9,038	9,347	5.7	3.4	5.4
AGRICULTURAL SCIENCES	1,729	1,855	1,846	2,042	2,176	2,298	2,294	4.9	-.2	4.1
BIOLOGICAL SCIENCES	3,458	3,506	3,629	4,158	4,316	4,612	4,839	4.9	4.9	4.9
ANATOMY	65	48	61	82	83	87	89	5.0	2.3	4.6
BIOCHEMISTRY	420	400	422	435	493	584	661	5.6	13.2	6.7
BIOLOGY	557	578	573	674	726	736	745	4.8	1.2	4.2
BIOMETRY/EPIDEMIOLOGY	72	66	93	130	145	161	151	14.4	-6.2	11.2
BIOPHYSICS	90	69	84	72	86	61	70	-6.3	14.8	-3.5
BOTANY	431	454	481	510	513	528	579	3.4	9.7	4.3
CELL BIOLOGY	57	58	62	63	65	79	95	2.8	20.3	5.1
ECOLOGY	33	31	32	50	47	72	80	13.9	11.1	13.5
ENTOMOLOGY/PARASITOLOGY	231	242	234	225	227	263	227	2.2	-13.7	-.2
GENETICS	86	90	104	93	98	90	111	.8	23.3	3.7
MICROBIOLOGY	317	295	297	377	409	416	462	4.6	11.1	5.5
NUTRITION	610	636	676	753	746	799	789	4.6	-1.3	3.7
PATHOLOGY	90	115	104	147	159	176	161	11.8	-8.5	8.7
PHARMACOLOGY	162	151	153	195	185	199	244	3.5	22.6	6.0
PHYSIOLOGY	108	130	110	178	171	180	188	8.9	4.4	8.2
ZOOLOGY	110	131	126	137	131	134	133	3.3	-.7	2.7
BIOSCIENCES, N.E.C.	9	12	17	37	42	47	54	31.7	14.9	29.2
HEALTH SCIENCES	1,297	1,358	1,392	1,987	2,004	2,128	2,214	8.6	4.0	7.9
ANESTHESIOLOGY	3	1	0	1	1	2	2	-16.7	100.0	-5.6
CANCER/ONCOLOGY	7	8	10	6	6	6	0	-2.5	-100.0	-100.0
CARDIOLOGY	5	0	0	0	5	1	0	-23.5	-100.0	-100.0
DENTISTRY	102	152	159	231	243	190	157	10.9	-17.4	6.4
ENDOCRINOLOGY	4	5	3	1	1	3	7	-4.7	133.3	8.3
GASTROENTEROLOGY	1	0	0	0	1	0	0	.0	-100.0	-100.0
HEMATOLOGY	0	0	2	1	0	0	0	**	**	**
NEUROLOGY	17	10	17	18	20	19	17	1.9	-10.5	.0
NURSING	53	70	146	182	173	220	197	26.8	-10.5	20.6
OBSTETRICS/GYNECOLOGY	8	8	5	8	1	2	10	-20.6	400.0	3.2
OPHTHALMOLOGY	2	0	0	1	2	3	4	7.0	33.3	10.4
OTORHINOLARYNGOLOGY	9	12	4	3	0	0	0	-100.0	**	-100.0
PEDIATRICS	7	5	6	3	8	19	19	18.1	.0	15.3
PHARMACEUTICAL SCIENCES	409	403	425	477	462	538	582	4.7	8.2	5.2
PREVENTIVE MEDICINE COMMUNITY HEALTH	292	300	251	499	578	578	695	12.1	20.2	13.2
PSYCHIATRY	2	4	3	4	2	0	4	-100.0	**	17.0
PULMONARY DISEASE	0	0	0	0	0	0	1	**	**	**
RADIOLOGY	31	36	34	39	37	37	39	3.0	5.4	3.3
SPEECH PATHOLOGY/AUDIOLOGY	146	118	103	207	191	229	188	7.8	-17.9	3.7
SURGERY	19	21	12	11	14	9	19	-11.7	111.1	.0
VETERINARY SCIENCES	93	108	119	143	111	108	92	2.5	-14.8	-.2
CLINICAL MEDICINE, N.E.C.	34	19	25	23	30	33	46	-.5	39.4	4.4
HEALTH RELATED, N.E.C.	53	78	69	129	119	131	133	16.3	1.5	14.0
PSYCHOLOGY	575	572	621	968	1,055	832	898	6.4	7.9	6.6
SOCIAL SCIENCES	6,114	6,282	6,966	8,610	9,634	10,211	9,882	8.9	-3.2	7.1
AGRICULTURAL ECONOMICS	623	587	623	650	736	757	690	3.3	-8.9	1.5
ANTHROPOLOGY	294	253	286	321	389	422	379	8.8	-10.2	5.9
ECONOMICS (EXCEPT AGRICULTURAL)	2,241	2,494	2,677	3,022	3,359	3,524	3,390	7.8	-3.8	6.1
GEOGRAPHY	239	242	249	334	361	352	381	6.7	8.2	6.9
HISTORY AND PHILOSOPHY OF SCIENCE	25	24	25	30	25	30	35	3.1	16.7	4.9
LINGUISTICS	358	400	458	611	739	732	708	12.7	-3.3	10.2
POLITICAL SCIENCE	1,208	1,116	1,383	1,968	2,211	2,378	2,347	12.0	-1.3	10.0
SOCIOLOGY	625	638	677	818	919	1,037	980	8.8	-5.5	6.6
SOCIOLOGY/ANTHROPOLOGY	62	60	63	106	100	96	127	7.6	32.3	10.8
SOCIAL SCIENCES, N.E.C.	479	468	525	750	795	883	845	10.7	-4.3	8.4

1/ DISTRIBUTION BY CITIZENSHIP WAS NOT REQUESTED IN 1978.

SOURCE: Graduate Science Education: Student Support and Post Doctorals Fall 1982, National Science Foundation

TABLE 1-28

FULL-TIME SCIENCE AND ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY AREA, MAJOR SOURCE OF SUPPORT AND SEX, 1982

	Total S/E		Engineering		Physical Sciences		Environmental Sciences		Math/Computer Sciences		Agricultural Sciences		Biological Sciences		Health Sciences		Psychology		Social Sciences	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MALE																				
All Sources	167,270	100.0	45,115	100.0	19,667	100.0	8,525	100.0	14,960	100.0	7,556	100.0	22,329	100.0	7,247	100.0	11,267	100.0	30,604	100.0
Federal Total	33,463	20.0	10,226	22.7	6,530	33.2	2,202	25.8	1,721	11.5	1,303	17.2	6,468	29.0	1,566	21.6	1,202	10.7	2,245	7.3
DoD	5,511	3.3	3,294	7.3	626	3.2	267	3.1	786	5.3	7	0.1	86	0.4	117	1.6	79	0.7	249	0.8
HHS Total	8,131	4.9	422	0.9	1,141	5.8	52	0.6	69	0.5	25	0.3	4,358	19.5	1,107	15.3	634	5.6	323	1.1
NIH	6,801	4.1	338	0.7	1,073	5.5	30	0.4	58	0.4	23	0.3	4,175	18.7	635	8.8	339	3.0	131	0.4
Other	1,330	0.8	84	0.2	68	0.3	22	0.3	11	0.1	2	*	184	0.8	472	6.5	295	2.6	192	0.6
NSF	7,638	4.6	2,375	5.3	2,700	13.7	909	10.7	514	3.4	48	0.6	735	3.3	27	0.4	169	0.9	225	0.7
All Other Federal	12,183	7.3	4,135	9.2	2,063	10.5	974	11.4	352	2.4	1,223	16.2	1,289	5.8	315	4.3	384	3.4	1,448	4.7
Institutional	65,104	38.9	13,762	30.5	10,382	52.8	3,046	35.7	7,310	48.9	2,540	33.6	9,866	44.2	2,072	28.6	4,258	37.8	11,868	38.8
Other Outside	19,441	11.6	7,175	15.9	1,491	7.6	969	11.4	1,055	7.1	1,772	23.5	2,163	9.7	740	10.2	737	6.5	3,339	10.9
All Other U.S.	11,608	6.9	4,779	10.6	1,101	5.6	631	7.4	593	4.0	695	9.2	1,320	5.9	421	5.8	699	6.2	1,369	4.5
Foreign	7,833	4.7	2,396	5.3	390	2.0	338	4.0	462	3.1	1,077	14.3	843	3.8	319	4.4	38	0.3	1,970	6.4
Self Support	49,262	29.5	13,952	30.9	1,264	6.4	2,308	27.1	4,874	32.6	1,941	25.7	3,832	17.2	2,869	39.6	5,070	45.0	13,152	43.0
FEMALE																				
All Sources	88,689	100.0	5,461	100.0	4,404	100.0	2,806	100.0	5,090	100.0	2,494	100.0	14,695	100.0	16,355	100.0	14,616	100.0	22,768	100.0
Federal Total	15,338	17.3	964	17.7	1,195	27.1	648	23.1	263	5.2	394	15.8	3,857	26.2	4,974	30.4	1,225	8.4	1,818	8.0
DoD	552	0.6	171	3.1	82	1.9	32	1.1	61	1.2	2	0.1	35	0.2	81	0.5	49	0.3	39	0.2
HHS Total	8,393	9.5	83	1.5	377	8.6	25	0.9	17	0.3	13	0.5	2,695	18.3	3,836	23.5	694	4.7	653	2.9
NIH	4,347	4.9	65	1.2	362	8.2	12	0.4	9	0.2	10	0.4	2,557	17.4	672	4.1	409	2.8	251	1.1
Other	4,046	4.6	18	0.3	15	0.3	13	0.5	8	0.2	3	0.1	138	0.9	3,164	19.3	285	1.9	402	1.8
NSF	1,680	1.9	202	3.7	419	9.5	284	10.1	105	2.1	24	1.0	398	2.7	14	0.1	104	0.7	130	0.6
All Other Federal	4,713	5.3	508	9.3	317	7.2	307	10.9	80	1.6	355	14.2	729	5.0	1,043	6.4	378	2.6	996	4.4
Institutional	32,641	36.8	1,834	33.6	2,639	59.9	1,183	42.2	2,584	50.8	1,033	41.4	6,734	45.8	3,025	18.5	5,149	35.2	8,460	37.2
Other Outside	5,188	5.8	727	13.3	295	6.7	228	8.1	288	5.7	301	12.1	971	6.6	642	3.9	662	4.5	1,074	4.7
All Other U.S.	3,824	4.3	583	10.7	230	5.2	189	6.7	171	3.4	198	7.9	717	4.9	503	3.1	618	4.2	615	2.7
Foreign	1,364	1.5	144	2.6	65	1.5	39	1.4	117	2.3	103	4.1	254	1.7	139	0.8	44	0.3	459	50.1
Self Support	35,522	40.1	1,936	35.5	275	6.2	747	26.6	1,955	38.4	766	30.7	3,133	21.3	7,714	47.2	7,580	51.9	11,416	50.1

*Less than 0.1%.

CHAPTER 2

GENERAL DEGREES

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SOURCE: Doctorate Records File, National Research Council

TABLE 2-1

NUMBER AND PERCENT OF DOCTORAL DEGREES AWARDED TO WOMEN BY FIELD AND DECADE, 1920-1983

FIELD	DECADE															
	1920-29		1930-39		1940-49		1950-59		1960-69		1970-79		1980-83		1920-83	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
PHYSICAL SCIENCES	247	7.6	442	6.6	406	5.0	685	3.7	1,577	4.6	3,946	8.2	1,930	12.9	9,233	6.8
Math	51	14.5	115	14.8	89	10.7	113	5.0	364	5.7	1,092	10.1	416	14.4	2,240	9.2
Physics & Astronomy	39	5.9	51	3.8	62	4.2	98	2.0	213	2.2	532	3.9	298	7.3	1,293	3.6
Chemistry	141	7.3	254	6.4	223	4.2	443	4.4	931	6.4	1,888	10.4	1,058	16.1	4,938	8.1
Earth & Environmental Sciences	16	4.8	22	3.5	32	5.7	31	1.9	69	2.0	348	5.8	320	12.8	838	5.5
COMPUTER SCIENCES											38	11.5	103	10.8	141	11.0
ENGINEERING	2	0.9	6	0.7	7	0.5	20	0.3	77	0.4	424	1.4	437	4.2	973	1.3
LIFE SCIENCES	378	15.9	765	15.1	738	12.7	1,318	9.1	3,078	11.6	8,921	18.1	6,044	27.6	21,237	17.0
Biological	341	19.5	698	17.8	699	15.7	1,174	11.8	2,739	15.1	7,068	21.6	4,205	29.9	16,924	19.9
Agricultural	8	2.2	11	1.6	5	0.6	36	1.1	80	1.4	496	5.0	578	12.8	1,214	4.5
Medical/Health	29	10.9	56	12.4	34	6.9	108	8.1	259	9.5	1,303	21.2	1,261	34.1	3,050	20.2
SOCIAL SCIENCES	325	17.1	562	15.8	580	14.5	1,510	11.0	3,604	14.3	14,641	24.5	9,101	36.3	30,218	22.7
Anthropology/Sociology	40	16.4	117	20.4	121	17.0	311	15.4	660	18.6	3,258	33.7	1,542	41.3	6,049	29.4
Economics	52	8.5	71	6.4	83	7.1	125	4.2	245	4.6	734	8.8	434	13.9	1,745	7.7
Political Sci. & Public Admin.	26	9.0	45	8.5	45	7.8	87	5.4	257	8.2	1,043	14.8	509	21.0	2,039	12.9
Psychology	189	29.4	290	26.0	302	24.1	911	14.8	2,264	20.7	8,361	32.2	5,788	44.8	18,105	30.7
ARTS & HUMANITIES	619	25.7	1,291	24.5	1,182	22.9	1,758	15.5	4,423	19.5	14,625	31.4	6,115	41.7	30,013	28.6
History	143	21.6	277	19.3	237	16.6	327	10.4	638	11.3	1,662	15.9	970	32.4	2,666	10.2
English & American Literature	159	30.8	385	28.4	385	26.8	548	17.8	1,515	23.9	4,669	38.9	1,703	49.8	9,393	33.3
Modern Foreign Language	101	29.8	287	27.0	284	29.2	396	22.9	1,032	31.2	3,336	46.8	1,153	58.1	5,544	33.7
PROFESSIONAL FIELDS	38	6.9	78	7.7	113	9.6	249	9.2	798	12.3	2,387	16.9	1,790	30.1	5,453	17.1
Business Administration			2	1.0	14	6.3	32	3.4	77	2.6	355	5.0	418	15.5	898	6.3
Law, Jurisprudence	9	3.9	14	4.7	7	6.3	14	4.7	6	2.2	15	5.4	5	5.6	70	4.0
Library Sciences			8	33.3	15	34.1	18	28.6	43	27.0	233	40.7	157	60.1	474	42.1
Social Work			1	50.0	3	50.0	26	41.3	180	36.7	506	88.3	420	53.3	1,136	42.3
EDUCATION	209	18.1	615	19.7	1,086	22.8	2,431	18.0	5,367	19.5	21,258	30.2	14,038	47.7	45,004	29.9
TOTAL ALL FIELDS	1,826	15.3	3,784	14.8	4,115	13.5	7,972	9.9	18,964	11.7	66,269	20.7	39,801	32.0	142,741	18.9

SOURCE: Summary Reports, Doctorate Recipients from United States Universities, 1975 through 1983, National Academy of Sciences

TABLE 2-2

DOCTORATES AWARDED BY U.S. UNIVERSITIES BY SEX, CY 1920 - FY 1983

YEAR	MEN	WOMEN		TOTAL	YEAR	MEN	WOMEN		TOTAL
	No.	No.	%*			No.	No.	%*	
CY 1920	472	88	15.7	560	1955	8,023	881	9.9	8,904
1921	554	107	16.2	661	1956	7,695	806	9.5	8,501
1922	668	112	14.4	780	1957	(5,486)**	(701)**	11.3	(6,187)**
1923	905	157	14.8	1,062	FY1958	7,782	991	11.3	8,773
1924	963	170	15.0	1,133	1959	8,236	976	10.6	9,212
1925	1,004	202	16.8	1,206	1960	8,690	1,042	10.7	9,732
1926	1,242	200	13.9	1,442	1961	9,284	1,128	10.8	10,412
1927	1,306	233	15.1	1,539	1962	10,269	1,236	10.7	11,505
1928	1,392	236	14.5	1,628	1963	11,333	1,391	10.9	12,724
1929	1,592	321	16.8	1,913	1964	12,763	1,561	10.9	14,324
1930	1,758	313	15.1	2,071	1965	14,581	1,759	10.8	16,340
1931	1,979	361	15.4	2,340	1966	15,863	2,090	11.6	17,953
1932	2,017	384	16.0	2,401	1967	17,944	2,440	12.0	20,384
1933	2,113	347	14.1	2,460	1968	19,985	2,931	12.8	22,916
1934	2,346	350	13.0	2,696	1969	22,341	3,387	13.2	25,728
1935	2,152	369	14.6	2,521	1970	25,509	3,970	13.5	29,479
1936	2,299	413	15.2	2,712	1971	27,247	4,594	14.4	31,841
1937	2,346	403	14.7	2,749	1972	27,719	5,282	16.0	33,001
1938	2,337	419	15.2	2,756	1973	27,645	6,082	18.0	33,727
1939	2,524	424	14.4	2,948	1974	26,585	6,415	19.4	33,000
1940	2,848	428	13.1	3,276	1975	25,720	7,193	21.9	32,913
1941	3,078	403	11.6	3,481	1976	25,247	7,676	23.3	32,923
1942	2,981	421	12.4	3,402	1977	23,827	7,845	24.8	31,672
1943	2,191	394	15.2	2,585	1978	22,537	8,313	26.9	30,850
1944	1,621	333	17.0	1,954	1979	22,279	8,921	28.6	31,200
1945	1,288	333	20.5	1,621	1980	21,595	9,387	30.3	30,982
1946	1,608	381	19.2	1,989	1981	21,447	9,872	31.5	31,319
1947	2,546	412	13.9	2,958	1982	20,991	10,057	32.4	31,040
1948	3,432	466	12.0	3,898	1983	20,705	10,425	33.4	31,190
1949	4,875	546	10.1	5,421	TOTAL	611,445	142,681	18.9	754,126
1950	5,898	621	9.5	6,519					
1951	6,649	682	9.3	7,331					
1952	6,984	732	9.5	7,716					
1953	7,589	789	9.4	8,378					
1954	7,912	794	9.1	8,706					

* Percent of total doctorate recipients.

**First half of calendar year.

SOURCE: Historical Statistics of the United States, Bureau of the Census, 1960 and Earned Degrees, 1969-70, 1979-80, NCES

TABLE 2-3

PROPORTION OF COLLEGE AND UNIVERSITY DEGREES EARNED BY WOMEN, 1870-1980

YEAR	ALL DEGREES	BACHELOR'S	MASTER'S	PH.D'S
1870		14.7		
1880		19.3		5.6
1890		17.3		1.3
1900	16.9	19.7	19.1	6.0
1910	22.7	22.7	26.4	9.9
1920	33.7	34.2	30.2	15.1
1930	39.5	39.9	40.4	15.4
1940	40.5	41.6	38.3	13.0
1950	24.4	23.9	29.2	9.7
1960	34.2	35.3	35.1	10.5
1970	40.4	41.5	39.7	13.3
1980	48.8	49.2	49.5	29.7

SOURCE: Doctorate Recipients from United States Universities, 1965-1983, National Research Council

TABLE 2-4

SCIENCE AND ENGINEERING DOCTORATE DEGREES, 1965-1983

Year	Total S/E	Physical Sciences[1]	Engineering	Math Sciences[2]	Life Sciences	Social Sciences[3]
	TOTAL DEGREES AWARDED					
1965	10,477	2,865	2,073	685	2,539	2,315
1966	11,456	3,058	2,299	769	2,712	2,618
1967	12,982	3,502	2,603	830	2,967	3,080
1968	14,411	3,667	2,847	970	3,501	3,426
1969	15,949	3,910	3,249	1,064	3,796	3,930
1970	17,731	4,400	3,432	1,222	4,163	4,514
1971	18,880	4,494	3,495	1,236	4,533	5,122
1972	18,940	4,226	3,475	1,281	4,505	5,453
1973	18,948	4,016	3,338	1,222	4,574	5,798
1974	18,316	3,696	3,144	1,196	4,407	5,873
1975	18,352	3,611	2,959	1,149	4,540	6,093
1976	17,872	3,442	2,791	1,003	4,480	6,156
1977	17,373	3,410	2,641	959	4,266	6,097
1978	17,956	3,234	2,423	959	4,887	6,453
1979	18,247	3,321	2,494	977	5,076	6,379
1980	16,171	3,151	2,479	963	5,325	6,253
1981	18,662	3,208	2,528	960	5,461	6,505
1982	18,747	3,348	2,644	940	5,565	6,250
1983	18,799	3,438	2,780	986	5,540	6,055
	DEGREES AWARDED TO WOMEN					
1965	744	127	7	50	263	297
1966	911	132	8	48	326	397
1967	1,086	161	9	48	401	467
1968	1,295	185	12	47	483	568
1969	1,472	205	10	56	537	664
1970	1,626	243	15	77	538	753
1971	1,929	244	16	96	656	917
1972	2,101	269	21	96	680	1,035
1973	2,446	257	45	119	795	1,230
1974	2,590	260	34	115	784	1,397
1975	2,838	284	50	110	863	1,531
1976	2,986	296	53	113	870	1,654
1977	3,103	303	74	128	845	1,753
1978	3,526	309	53	131	1,082	1,951
1979	3,854	351	63	145	1,190	2,105
1980	4,099	386	90	116	1,342	2,165
1981	4,359	364	99	138	1,443	2,315
1982	4,531	458	124	116	1,542	2,291
1983	4,838	468	124	149	1,717	2,330

[1] Includes Environmental Science
[2] Includes Computer Science
[3] Includes Psychology

SOURCE: Summary Report 1983 Doctorate Recipients from United States Universities, National Research Council

TABLE 2-5

DOCTORATE RECIPIENTS, 1983

FIELD	Total	Women	Foreign Temp. Visa	U.S. & Permanent Visa			
				Black	Asian	Hispanic	Indian
PHYSICAL SCIENCES	4,424	617	926	32	216	44	9
Mathematics	701	113	269	3	34	7	0
Computer Science	285	36	72	3	20	0	1
Physics/Astronomy	1,042	74	256	9	53	5	3
Chemistry	1,759	297	283	16	83	20	3
Earth, Atmosph./Marine	637	97	106	1	26	11	2
ENGINEERING	2,780	124	1,169	29	247	29	1
LIFE SCIENCES	5,540	1,717	775	74	239	59	7
Biology	3,732	1,231	322	46	164	43	4
Agriculture	1,172	151	366	12	37	10	1
Health Sciences	636	335	87	16	38	6	2
SOCIAL SCIENCES	2,748	808	491	87	65	58	3
PSYCHOLOGY	3,307	1,572	79	112	44	92	9
HUMANITIES	3,494	1,530	257	79	47	113	6
PROFESSIONAL FIELDS	1,728	504	240	69	64	24	1
EDUCATION	7,147	3,604	555	516	118	185	44
TOTAL ALL FIELDS	31,190	10,485	4,495	1,000	1,040	604	80

SOURCE: Summary Reports: Doctorate Recipients from United States Universities, 1962, 1966, 1970, 1974, 1980, 1983, National Research Council

TABLE 2-6

PERCENT OF S/E DOCTORAL RECIPIENTS WHO WERE FOREIGN NATIONALS ON TEMPORARY VISAS, SELECTED YEARS

FIELD	1962 %	1966 %	1970 %	1974 %	1980 %	1983 %
Physics/Astronomy	13.7	12.2	11.3	17.2	19.2	24.6
Chemistry	9.7	11.1	7.9	10.2	15.4	16.1
Earth/Environ. Science	9.2	12.9	13.9	16.1	12.7	16.6
Mathematics	16.8	12.6	10.9	18.5	18.7	29.8
Economics	17.2	20.1	17.2	22.0	25.0	25.9
Political Science	19.1	13.0	9.3	10.8	11.9	13.9
Engineering	17.9	16.7	13.7	22.4	34.3	42.1
Biological Science	14.4	14.3	10.5	10.5	7.8	8.6
Medical Science	14.6	18.6	16.6	9.4	11.3	13.7
Agricultural Science	23.8	30.4	25.3	33.2	32.6	31.2
TOTAL S/E	**15.2**	**15.3**	**12.5**	**16.7**	**18.8**	**15.5**

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and 1980-1983 Summary Report, Doctorate Recipients from United States Universities, National Research Council, 1981-1984

TABLE 2-7

NUMBER OF Ph.D. RECIPIENTS IN ALL SCIENCE/ENGINEERING FIELDS BY TYPE OF CITIZENSHIP, 1960-1983

YEAR	TOTAL	U.S.	FOREIGN			Citizenship not Known
			TOTAL	Immigrants	Non-Immigrants	
1960	6,316	5,301	966	223	743	49
1961	6,757	5,632	1,032	182	850	93
1962	7,493	6,231	1,174	138	1,036	88
1963	8,279	6,884	1,258	234	1,024	137
1964	9,297	7,625	1,488	294	1,194	184
1965	10,542	8,590	1,797	357	1,440	155
1966	11,537	9,263	1,978	369	1,609	296
1967	13,065	10,561	2,253	568	1,685	251
1968	14,526	11,808	2,489	678	1,811	229
1969	16,075	13,080	2,721	842	1,879	274
1970	17,840	14,494	3,165	1,136	2,029	181
1971	19,078	15,300	3,514	1,411	2,103	264
1972	19,127	15,005	3,812	1,632	2,180	310
1973	19,121	14,788	4,004	1,565	2,439	329
1974	18,460	13,560	4,050	1,388	2,662	850
1975	18,488	14,107	4,015	1,257	2,758	366
1976	18,089	13,922	3,801	1,068	2,713	366
1977	17,641	13,538	3,609	982	2,627	494
1978	17,034	13,009	3,472	970	2,502	553
1979	17,230	13,195	3,526	924	2,602	509
1980	18,171	13,901	3,743	969	2,774	527
1981	18,662	14,090	3,919	927	2,992	853
1982	18,747	13,854	4,082	886	3,196	811
1983	18,799	13,742	4,361	921	3,440	696

SOURCE: Women and Minority Ph.D's in the 1970's - A Data Book, 1977, and Summary Report, Doctorate Recipients from U.S. Universities, Series, 1977-1983, National Research Council

TABLE 2-8

DOCTORAL RECIPIENTS WHO ARE U.S. CITIZENS OR HAVE PERMANENT VISAS, BY FIELD, DEGREE COHORT, AND RACIAL/ETHNIC GROUP, 1973-1983

FIELD AND PH.D. COHORT	Total	WHITE		BLACK		AM. INDIAN		HISPANIC		ASIAN		OTHER/UNKNOWN	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ALL FIELDS	**299,859**	**251,272**	**83.8**	**11,416**	**3.8**	**1,420**	**0.4**	**4,923**	**1.6**	**11,397**	**3.8**	**19,424**	**6.5**
1973-76	115,523	94,530	81.8	3,692	3.2	526	0.5	1,161	1.0	4,163	3.6	11,451	9.9
1977-80	106,977	90,091	84.2	4,487	4.2	655	0.6	2,021	1.9	4,132	3.9	5,591	5.2
1981-83	77,359	66,651	86.2	3,237	4.2	239	0.3	1,741	2.3	3,102	4.0	2,382	3.1
MATHEMATICS	**7,089**	**6,177**	**87.1**	**98**	**1.4**	**20**	**0.3**	**69**	**1.0**	**466**	**6.6**	**259**	**3.6**
1973-76	2,996	2,675	89.3	34	1.1	13	0.4	21	0.7	186	6.2	67	2.2
1977-80	2,614	2,225	85.1	46	1.8	5	0.2	30	1.1	174	6.7	134	5.1
1981-83	1,479	1,277	86.3	18	1.2	2	0.1	18	1.2	106	7.2	58	3.9
COMPUTER SCIENCES	**1,687**	**1,193**	**70.7**	**13**	**0.8**	**9**	**0.5**	**9**	**0.5**	**115**	**6.8**	**352**	**20.9**
1973-76	706	353	50.0	6	0.8	2	0.3	5	0.7	43	6.1	297	42.1
1977-80	433	370	92.7	1	0.3	3	0.8	3	0.8	22	5.5	34	8.5
1981-83	548	470	85.7	6	1.1	4	0.7	1	0.2	50	9.1	21	3.8
PHYSICS/ASTRONOMY	**10,436**	**8,205**	**78.6**	**84**	**0.8**	**32**	**0.3**	**96**	**0.9**	**661**	**6.3**	**988**	**9.5**
1973-76	4,378	3,516	80.3	28	0.6	13	0.3	27	0.6	280	6.4	514	11.7
1977-80	3,791	2,760	72.8	30	0.8	13	0.3	47	1.2	230	6.1	341	9.0
1981-83	2,267	1,929	85.1	26	1.1	6	0.3	22	1.0	151	6.7	133	5.9
CHEMISTRY	**15,427**	**12,751**	**82.6**	**227**	**1.5**	**44**	**0.3**	**166**	**1.1**	**1,179**	**7.6**	**1,060**	**6.9**
1973-76	6,081	4,880	80.3	86	1.4	12	0.2	41	0.7	476	7.8	586	9.6
1977-80	5,234	4,283	81.8	92	1.8	28	0.5	65	1.2	442	8.4	324	6.2
1981-83	4,112	3,588	87.3	49	1.2	4	0.1	60	1.5	261	6.3	150	3.6
EARTH/ ENV./ MARINE	**5,673**	**4,957**	**87.4**	**20**	**0.3**	**26**	**0.5**	**60**	**1.1**	**227**	**4.0**	**383**	**6.8**
1973-76	1,901	1,590	83.6	2	0.1	11	0.6	9	0.5	74	3.9	215	11.3
1977-80	2,218	1,958	88.3	10	0.5	13	0.6	27	1.2	89	4.0	121	5.4
1981-83	1,554	1,409	90.7	8	0.5	2	0.1	24	1.5	64	4.1	47	3.0
ENGINEERING	**19,889**	**13,011**	**65.4**	**202**	**1.0**	**61**	**0.3**	**237**	**1.2**	**3,095**	**15.6**	**1,650**	**8.3**
1973-76	8,934	6,452	72.2	75	0.8	24	0.3	51	0.6	1,217	13.6	1,115	12.5
1977-80	6,546	4,867	74.4	66	1.0	29	0.4	106	1.6	1,103	16.8	375	5.7
1981-83	4,409	3,318	75.3	61	1.4	8	0.2	80	1.8	775	17.6	160	3.6
BIOLOGICAL SCIENCES	**32,622**	**28,015**	**85.9**	**476**	**1.5**	**134**	**0.4**	**343**	**1.1**	**1,547**	**4.7**	**2,107**	**6.5**
1973-76	11,508	9,472	82.3	185	1.6	47	0.4	101	0.9	536	4.7	1,167	10.1
1977-80	11,660	10,117	86.8	156	1.3	72	0.6	116	1.0	569	4.9	630	5.4
1981-83	9,454	8,426	89.1	135	1.4	15	0.2	126	1.3	442	4.7	310	3.3
AGRICULTURAL SCIENCES	**7,656**	**6,613**	**86.4**	**124**	**1.6**	**33**	**0.4**	**86**	**1.1**	**387**	**5.1**	**413**	**5.4**
1973-76	2,753	2,297	90.8	31	1.2	13	0.5	18	0.7	171	6.8	223	8.1
1977-80	2,626	2,284	87.0	54	2.1	14	0.5	32	1.2	124	4.7	118	4.5
1981-83	2,277	2,032	89.2	39	1.7	6	0.3	36	1.6	92	4.0	72	3.1
MEDICAL/HEALTH SCIENCES	**6,727**	**5,599**	**83.2**	**196**	**2.9**	**25**	**0.4**	**61**	**0.9**	**437**	**6.5**	**409**	**6.1**
1973-76	2,028	1,605	88.3	47	2.6	6	0.3	12	0.6	147	8.1	211	10.4
1977-80	2,567	2,151	83.8	97	3.8	10	0.4	23	0.9	162	6.3	124	4.8
1981-83	2,132	1,843	86.4	52	2.4	9	0.4	26	1.2	128	6.0	74	3.5
SOCIAL SCIENCES	**30,209**	**25,370**	**84.0**	**1,095**	**3.6**	**125**	**0.4**	**501**	**1.7**	**903**	**3.0**	**2,215**	**7.3**
1973-76	12,056	10,007	83.0	315	2.6	49	0.4	107	0.8	289	2.4	1,289	10.7
1977-80	11,119	9,374	84.3	454	4.1	65	0.6	218	2.0	356	3.2	652	5.9
1981-83	7,034	5,989	85.1	326	4.6	11	0.2	176	2.5	258	3.7	274	3.9
PSYCHOLOGY	**30,530**	**26,955**	**88.3**	**1,000**	**3.3**	**145**	**0.5**	**517**	**1.7**	**347**	**1.1**	**1,566**	**5.1**
1973-76	10,094	8,755	94.9	240	2.6	47	0.5	93	1.0	88	1.0	871	8.6
1977-80	11,284	9,967	88.3	420	3.7	63	0.6	192	1.7	143	1.3	499	4.4
1981-83	9,152	8,233	90.0	340	3.7	35	0.4	232	2.6	116	1.3	196	2.1
LANGUAGES & LITERATURE	**18,513**	**16,004**	**86.4**	**391**	**2.1**	**73**	**0.4**	**756**	**4.1**	**194**	**1.0**	**1,218**	**6.6**
1973-76	8,552	7,297	85.3	141	1.6	41	0.5	203	2.4	68	0.8	802	9.4
1977-80	6,295	5,555	88.2	151	2.4	25	0.4	307	4.9	68	1.1	312	5.0
1981-83	3,666	3,152	86.0	99	2.7	7	0.2	246	6.7	58	1.6	104	2.8
OTHER HUMANITIES	**25,549**	**20,546**	**80.4**	**258**	**1.0**	**126**	**0.5**	**345**	**1.3**	**492**	**1.9**	**1,997**	**7.8**
1973-76	10,453	8,816	84.3	198	1.9	52	0.5	77	0.7	181	1.7	1,129	10.8
1977-80	9,152	7,961	87.0	280	3.1	57	0.6	165	1.8	167	1.8	519	5.7
1981-83	5,944	5,340	89.8	176	3.0	17	0.3	103	1.7	144	2.4	208	3.5
PROFESSIONAL FIELDS	**13,522**	**11,510**	**85.1**	**524**	**3.9**	**43**	**0.3**	**166**	**1.2**	**420**	**3.1**	**859**	**6.4**
1973-76	4,987	4,173	92.9	142	3.2	18	0.4	39	0.7	119	2.7	496	9.9
1977-80	4,732	4,056	85.7	202	4.3	19	0.4	66	1.4	149	3.1	240	5.1
1981-83	3,803	3,281	86.3	190	4.7	6	0.2	61	1.6	152	4.0	123	3.2
EDUCATION	**74,047**	**60,741**	**82.0**	**6,325**	**8.5**	**532**	**0.7**	**1,362**	**1.8**	**937**	**1.3**	**4,003**	**5.4**
1973-76	27,596	22,211	88.3	2,155	8.6	178	0.7	351	1.3	255	1.0	2,446	8.9
1977-80	26,985	22,217	82.3	2,457	9.1	239	0.9	618	2.3	340	1.3	1,114	4.1
1981-83	19,466	16,313	83.8	1,711	8.8	115	0.6	393	2.0	342	1.8	443	2.3

SOURCE: Summary Report, Doctorate Recipients from U.S. Universities, 1974 to 1982, National Research Council

TABLE 2-9

NUMBER OF DOCTORATE RECIPIENTS BY SOURCES OF SUPPORT IN GRADUATE SCHOOL, FISCAL YEARS 1974, 1976, 1978, 1980 AND 1982

	FISCAL YEAR 1974				FISCAL YEAR 1976				FISCAL YEAR 1978				FISCAL YEAR 1980				FISCAL YEAR 1982			
SOURCE OF SUPPORT	MEN	%	WOMEN	%	MEN	%	WOMEN	%	MEN	%	WOMEN	%	MEN	%	WOMEN	%	MEN	%	WOMEN	%
FEDERAL SUPPORT																				
NSF Fellowship	1,305	5.3	206	3.5	1,105	4.6	226	3.1	586	2.7	139	1.8	554	2.7	153	1.7	496	2.5	135	1.4
NSF Traineeship	1,241	5.0	191	3.2	810	3.4	168	2.3	354	1.7	68	0.9	204	1.0	53	0.6	139	0.7	41	0.4
NIH Fellowship	663	2.7	270	4.6	500	2.1	227	3.1	369	1.7	193	2.5	341	1.7	207	2.3	313	1.6	199	2.1
NIH Traineeship	1,233	5.0	441	7.5	1,267	5.3	474	6.5	1,068	5.0	473	6.1	980	4.8	510	5.7	906	4.6	546	5.7
NDEA Fellowship	2,789	11.3	707	12.0	1,743	7.3	636	8.7	738	3.5	315	4.0	363	1.8	214	2.4	181	0.9	110	1.2
National Direct Student Loan					2,623	10.9	687	9.4	1,789	8.4	650	8.3	1,960	9.6	991	11.2	2,390	12.2	1,436	15.1
Other HEW					876	3.6	510	7.2	575	2.7	423	5.4	589	2.9	556	6.3	460	2.3	442	4.7
NASA Traineeship	324	1.3	22	0.4	152	0.6	11	0.2	57	0.3	8	0.1								
GI Bill	3,263	13.2	22	0.4	3,537	14.7	49	0.7	2,657	12.5	50	0.6	2,011	9.9	48	0.5	1,421	7.2	53	0.6
Other Federal Support*	2,631	10.7	702	11.9	1,838	7.7	449	6.2	1,159	5.4	341	4.4	1,147	5.6	413	4.6	1,134	5.8	486	5.1
NATIONAL FELLOWSHIPS**													507	2.5	338	3.8	563	2.9	383	4.0
INSTITUTIONAL FUNDS																				
University Fellowship	4,680	18.9	1,360	23.1	4,939	20.6	1,746	23.9	3,844	18.0	1,422	18.2	3,717	18.2	1,675	18.8	3,651	18.6	1,853	19.5
Teaching Assistantship	12,326	49.8	2,786	47.3	12,333	51.3	3,502	48.0	9,833	46.1	3,360	43.1	9,568	46.9	3,818	43.0	9,317	47.4	4,063	42.8
Research Assistantship	9,079	36.7	1,421	24.1	9,993	41.6	1,963	26.9	8,249	38.7	1,997	25.1	8,189	40.2	2,303	25.9	8,329	42.4	2,683	28.3
Ed. Funds, Industry	979	4.0	108	1.8	1,038	4.3	149	2.0	632	3.0	142	1.8	676	3.3	204	2.3	735	3.7	219	2.3
Other	2,163	8.7	701	11.9	2,205	9.2	884	12.1	1,453	6.8	678	8.7	1,462	7.2	845	9.5	1,430	7.3	892	9.4
PERSONAL FUNDS																				
Own Earnings	9,678	39.1	2,529	42.9	13,683	57.0	4,375	60.0	10,310	48.4	4,489	57.6	10,221	50.1	5,288	59.5	9,698	49.3	5,724	60.3
Spouse's Earnings	4,948	20.0	1,232	20.9	8,809	36.7	2,419	33.2	6,411	30.1	2,590	33.2	6,017	29.5	2,967	33.4	5,459	27.8	3,235	34.1
Family Contributions	1,632	6.6	495	8.4	4,042	16.8	1,357	18.6	2,876	13.5	1,215	15.6	3,158	15.5	1,530	17.2	3,432	17.5	1,698	17.9
Borrowings	3,308	13.4	703	11.9	3,227	13.4	865	11.9	1,995	9.4	799	10.2	2,054	10.1	926	10.4	2,247	11.4	1,297	13.7
Other	1,282	5.2	331	5.6	1,706	7.1	565	7.7	1,550	7.3	537	6.9	1,541	7.6	579	6.5	1,545	7.9	584	6.1
UNDUPLICATED TOTAL	24,761		5,894		24,024		7,295		21,323		7,799		20,385		8,886		19,664		9,496	

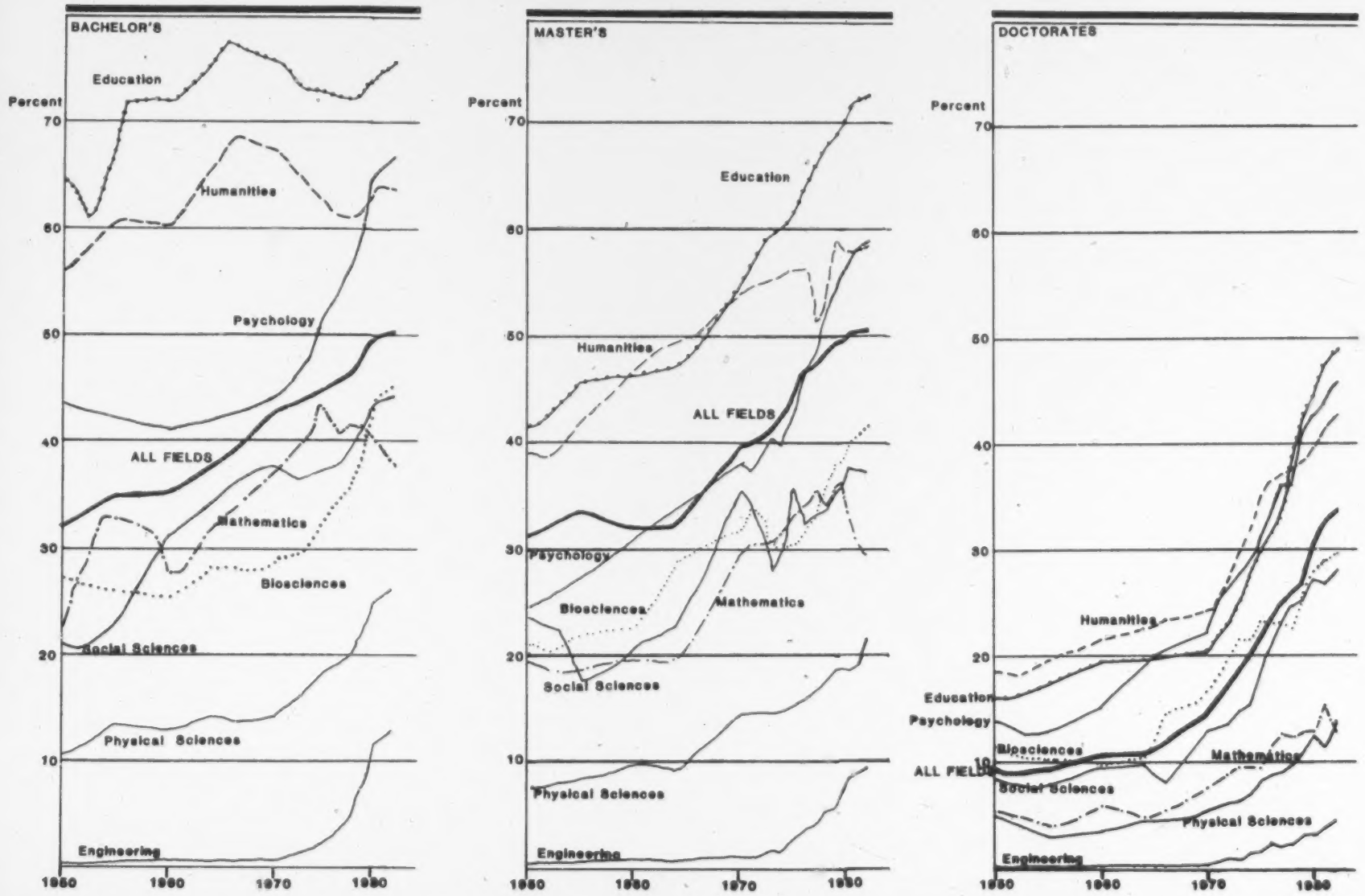
*Includes AEC/ERDA Fellowships and NASA Traineeships which were formerly shown separately, plus 83 recipients of funds under the new graduate and professional opportunities program.

**Includes Woodrow Wilson Fellowships which were formerly shown separately.

SOURCE: Series of Earned Degrees, USOE and Summary Report, Doctorate Recipients from United States Universities, 1971- 1982

TABLE 2-10

PERCENT OF DEGREES GRANTED TO WOMEN 1950 - 1982



SOURCE: Earned Degrees Conferred Series, 1971-72 through 1980-81 and Unpublished Data, National Center for Education Statistics, 1981-82

TABLE 2-11

PROPORTION OF BACHELOR'S AND MASTER'S DEGREES AWARDED TO WOMEN, BY FIELD, 1971-72 - 1981-82

	1971-72	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
BACHELOR'S DEGREES										
Agricultural & Nat. Resources	5.5%	9.7%	14.1%	18.3%	22.2%	24.6%	27.1%	29.6%	30.8%	31.3%
Architecture & Environ. Design	12.0	14.8	17.4	19.2	21.4	23.7	25.8	27.8	28.1	29.8
Area Studies	52.5	54.3	55.1	55.5	56.0	59.7	58.2	60.5	60.1	64.0
Biological Sciences	29.6	31.5	33.3	34.8	36.4	38.7	40.6	42.4	44.1	45.4
Business & Management	9.7	13.1	16.4	19.8	23.6	27.3	30.7	33.8	36.7	39.3
Communications	35.5	38.4	40.5	41.5	44.3	46.9	50.0	52.3	54.7	56.4
Computer & Inform. Science	13.6	16.4	19.0	19.8	23.9	25.8	28.1	30.3	32.5	34.8
Education	74.1	73.5	73.3	72.8	72.2	72.5	73.2	73.9	75.0	75.9
Engineering	1.0	1.6	2.2	3.2	4.5	6.7	8.3	9.3	10.3	11.4
Fine & Applied Arts	59.9	60.2	61.9	60.9	61.4	62.0	62.5	63.2	63.4	63.3
Foreign Languages	75.1	76.4	77.0	76.4	76.2	76.1	76.0	75.7	75.6	75.7
Health Professions	75.7	77.4	77.8	78.8	79.2	80.6	82.0	82.3	83.5	84.1
Home Economics	96.5	96.4	96.0	95.9	95.9	95.6	95.1	95.4	95.0	94.3
Law	6.6	10.5	14.2	18.8	27.5	28.6	40.4	45.5	50.0	50.8
Letters	60.1	58.0	57.3	56.9	56.7	57.2	58.0	59.4	59.8	60.7
Library Science	93.3	92.6	92.5	93.1	90.9	88.5	94.6	95.0	94.1	86.0
Mathematics	39.1	41.0	42.0	40.7	41.6	41.3	41.7	42.3	42.8	43.2
Military Science	0.0	0.3	0.0	0.2	0.3	2.3	3.5	4.0	3.9	7.4
Physical Sciences	15.1	16.6	18.4	19.2	20.1	21.5	22.6	23.9	24.6	25.7
Psychology	46.4	50.5	52.7	54.4	56.7	58.9	61.3	63.3	65.0	66.8
Public Affairs & Services	47.9	43.5	45.6	43.7	45.1	49.6	53.5	55.3	58.0	59.5
Social Sciences	36.3	36.6	37.4	37.9	39.4	40.6	42.0	43.7	44.2	44.7
Theology	27.8	28.1	27.4	27.3	25.7	24.1	25.6	25.4	25.4	25.6
Interdisciplinary Studies	31.1	37.1	42.2	45.0	47.0	47.3	49.9	50.2	51.0	52.1
ALL DISCIPLINES	**43.7**	**44.4**	**45.4**	**45.6**	**46.2**	**47.2**	**48.3**	**49.2**	**49.8**	**50.3**
MASTER'S DEGREES										
Agricultural & Nat. Resources	7.1	9.8	11.8	14.3	14.6	18.7	20.2	22.4	23.5	25.2
Architecture & Environ. Design	14.6	18.4	20.3	20.8	22.5	26.0	28.5	28.5	29.1	32.6
Area Studies	40.7	38.9	43.2	45.3	46.9	47.8	49.0	47.8	51.6	49.3
Biological Sciences	33.1	30.6	30.0	31.8	33.8	35.5	37.7	37.1	38.9	41.7
Business & Management	3.9	6.6	8.4	11.6	14.3	16.9	19.1	22.3	25.0	27.8
Communications	34.4	36.8	42.1	41.8	44.4	49.3	48.5	50.5	53.4	52.6
Computer & Inform. Science	11.4	12.9	14.7	14.5	16.7	18.7	18.8	20.9	23.0	26.5
Education	57.3	59.9	62.2	64.3	65.8	67.7	68.6	70.2	71.5	72.3
Engineering	1.6	2.3	2.4	3.6	4.4	5.3	6.1	7.0	8.2	9.1
Fine & Applied Arts	46.3	45.9	46.8	48.9	51.2	52.1	53.9	53.3	53.0	55.8
Foreign Languages	65.1	66.1	66.9	66.7	69.5	70.8	69.6	70.4	67.0	69.7
Health Professions	56.4	60.2	61.8	66.5	67.9	70.3	71.1	72.3	73.9	75.7
Home Economics	92.7	91.1	89.3	91.5	91.1	91.9	91.2	91.3	90.2	91.5
Law	5.8	7.1	8.0	12.0	13.2	14.6	15.5	15.7	17.8	20.2
Letters	57.7	56.6	58.8	58.3	59.5	61.8	61.3	60.6	61.1	62.0
Library Science	79.9	77.8	78.8	78.3	79.6	80.0	80.4	81.3	82.7	82.3
Mathematics	29.8	31.0	32.9	34.0	35.1	34.0	34.7	36.1	34.1	33.2
Military Science	0.0	0.0	0.0	0.0	2.3	2.2	0.0	0.0	0.0	2.0
Physical Sciences	14.1	14.6	14.5	15.0	16.6	17.0	18.2	18.6	18.4	21.7
Psychology	38.4	39.8	42.9	46.7	48.1	52.0	54.1	56.8	58.0	58.8
Public Affairs & Services	47.0	45.3	44.6	45.3	45.5	47.9	50.8	52.2	55.4	57.3
Social Sciences	28.2	28.8	30.0	31.6	32.9	33.2	35.3	36.2	37.6	37.8
Theology	23.4	27.2	30.9	32.1	31.4	30.5	32.0	31.0	33.6	34.8
Interdisciplinary Studies	39.2	45.8	47.7	46.5	37.1	37.5	38.8	42.2	39.8	42.9
All Disciplines	**40.6**	**43.1**	**44.8**	**46.4**	**47.1**	**48.3**	**49.1**	**49.5**	**50.3**	**50.8**

SOURCE: Earned Degrees Conferred, Series 1948 - 1979, National Center for Education Statistics, and Summary Report 1970 - 1979 Doctorates Awarded by U.S. Universities and Doctorate Records File, National Research Council

TABLE 2-12

PERCENT OF DEGREES AWARDED TO WOMEN BY TIME PERIOD, DEGREE LEVEL AND BROAD FIELD

FIELD	BACHELOR'S			MASTER'S			DOCTORATE			
	1948-1959	1960-1969	1970-1979	1948-1959	1960-1969	1970-1979	1940-1949	1950-1959	1960-1969	1970-1979
Total All Fields	32.1	40.0	45.2	31.9	34.6	44.5	13.5	9.9	11.7	20.7
Physical Sciences	12.8	13.8	17.7	8.2	10.6	15.0	5.0	3.7	4.6	8.2
Chemistry	18.6	19.0	21.6	13.0	18.9	22.4	4.2	4.4	6.4	10.4
Physics	4.5	5.3	8.7	3.9	4.7	8.0	4.2	2.0	2.2	3.9
Earth Sciences	4.1	9.1	18.0	3.5	6.4	14.2	5.7	1.9	2.0	5.8
Mathematics	29.1	34.2	40.0	19.8	23.8	31.6	10.7	5.0	5.7	10.1
Computer Sciences	-	12.5	20.9	-	7.5	14.5	-	-	-	11.5
Engineering	0.3	0.5	3.2	0.3	0.6	3.0	0.5	0.3	0.4	1.4
Life Sciences	-	-	-	-	-	-	12.7	9.1	11.6	18.1
Biological Sciences	25.8	28.4	33.7	21.0	27.7	32.9	15.7	11.8	15.1	21.6
Agricultural Sciences	1.8	3.4	15.9	1.9	4.5	12.8	0.6	1.1	1.4	5.0
Medical Sciences	-	-	-	-	-	-	6.9	8.1	9.5	21.2
Social Sciences*	27.2	32.6	36.4	18.3	20.5	31.2	14.5	11.0	14.3	31.6
Psychology	42.9	41.8	52.0	30.4	33.5	44.9	24.1	14.8	20.7	32.2
Business & Management	12.2	13.8	18.0	-	-	10.7	6.3	3.4	2.6	5.0
Arts & Humanities	60.2	66.4	57.3	43.1	50.3	51.6	22.9	15.5	19.5	31.4
Education	75.4	75.8	73.5	44.7	48.3	62.1	22.8	18.0	19.5	30.2

* Anthropology, Sociology, Economics and Political Science

SOURCE: Earned Degrees Conferred Series, 1970-71 - 1981-82, National Center for Education Statistics

TABLE 2-13

TOTAL AND PROPORTION OF BACHELOR'S, MASTER'S AND DOCTORAL DEGREES AWARDED TO WOMEN 1970-71 THROUGH 1981-82
BY BROAD DISCIPLINE DIVISION

	DEGREES AWARDED 1970-71 - 1981-82								
	Bachelor's			Master's			Ph. D.'s		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
Agriculture & Nat. Resources	227,725	46,767	20.5	41,242	6,680	16.2	11,916	794	6.7
Architecture & Environ. Design	100,431	21,408	21.3	52,466	7,953	15.2	858	146	17.0
Area Studies	33,778	19,115	56.6	11,196	4,941	44.1	1,815	536	29.5
Biological Sciences	560,296	204,406	36.5	77,171	26,589	34.5	42,520	9,627	22.6
Business & Management	1,881,027	462,276	24.6	520,946	82,511	15.8	10,691	859	8.0
Communications	264,331	123,420	46.7	33,813	15,073	44.6	2,068	54[illegible]	26.[illegible]
Computer & Inform. Sciences	94,548	25,519	27.0	34,547	6,275	18.2	2,537	213	8.[illegible]
Education	1,818,529	1,338,744	73.6	1,296,235	843,278	65.1	90,046	31,666	35.[illegible]
Engineering	690,904	39,319	5.7	196,196	8,717	4.4	35,278	838	2.[illegible]
Fine & Applied Arts	469,891	289,624	61.6	98,935	49,624	50.2	7,712	2,481	32.[illegible]
Foreign Languages	183,361	139,173	75.9	39,779	26,693	67.1	8,972	4,240	47.3
Health Professions	606,066	486,832	80.3	146,797	99,436	67.7	7,790	2,620	33.6
Home Economics	195,493	187,115	95.7	25,835	23,585	91.3	2,130	1,501	70.5
Law	7,178	2,058	28.7	17,352	2,247	12.9	488	36	7.4
Letters	650,051	381,879	58.7	127,756	75,484	59.1	26,898	9,450	35.1
Library Science	9,350	8,647	92.5	81,729	65,214	79.8	832	391	47.0
Mathematics	201,288	79,090	39.3	46,760	15,141	32.4	10,748	1,251	11.6
Military Science	5,496	71	1.3	221	2	0.9	-	-	-
Physical Sciences	267,808	48,254	18.0	67,749	11,217	16.6	42,309	3,841	9.1
Psychology	543,966	301,964	55.5	321,997	160,109	49.7	29,656	10,503	35.4
Public Affairs & Services	348,634	176,002	50.5	194,027	95,727	49.3	3,794	1,197	31.5
Social Sciences	1,538,197	602,406	39.2	180,579	57,434	31.8	44,599	9,506	21.3
Theology	62,428	16,297	26.1	40,379	12,234	30.3	11,492	580	5.0
Interdisciplinary Studies	347,850	156,595	45.0	45,275	18,787	41.5	3,560	1,055	29.6
ALL DISCIPLINES	**11,109,132**	**5,165,309**	**46.5**	**3,454,804**	**1,596,550**	**46.2**	**398,713**	**93,784**	**23.5**

SOURCE: National Center for Education Statistics, Unpublished

TABLE 2-14

BACHELOR'S, MASTER'S AND DOCTORAL DEGREES CONFERRED BY SEX AND FIELD, 1981-82

DISCIPLINE DIVISION & SPECIALTY	BACHELOR'S DEGREES			MASTER'S DEGREES			DOCTOR'S DEGREES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
TOTAL, ALL DISCIPLINE DIVISIONS	952,998	473,364	479,634	295,546	145,532	150,014	32,707	22,224	10,483
AGRICULTURE & NATURAL RESOURCES, TOTAL	21,029	14,443	6,586	4,163	3,114	1,049	1,079	925	154
Agriculture, General	2,195	1,594	601	412	326	86	14	14	0
Agronomy	1,332	1,050	282	461	389	72	202	174	28
Soils Science	475	317	140	165	128	37	83	72	11
nimal Science	3,551	1,959	1,592	453	301	152	146	129	17
Dairy Science	275	192	83	69	51	18	17	14	3
Poultry Science	141	102	39	39	24	15	15	15	0
Fish, Game, & Wildlife Management	1,140	818	322	326	269	57	64	62	2
Horticulture	1,417	727	690	254	157	97	88	72	16
Ornamental Horticulture	569	304	265	15	7	8	9	8	1
Agricultural & Farm Management	303	264	39	12	11	1	1	1	0
Agricultural Economics	1,909	1,551	358	535	428	107	160	137	23
Agricultural Business	1,685	1,385	300	74	58	16	12	10	2
Food Science Technology	724	320	404	347	205	142	99	67	32
Forestry	1,665	1,334	331	426	330	96	88	78	10
Natural Resources Management	1,788	1,126	662	264	197	67	30	25	5
Agriculture & Forestry Technologies	144	131	13	16	14	2	11	10	1
Range Management	235	190	45	80	69	11	21	18	3
Other	1,499	1,079	420	215	150	65	19	19	0
ARCHITECTURE & ENVIRONMENTAL DESIGN, TOTAL	9,728	6,825	2,903	3,327	2,242	1,085	80	58	22
Environmental Design, General	962	633	329	111	52	59	3	3	0
Architecture	5,796	4,720	1,076	1,610	1,213	397	22	16	6
Interior Design	1,076	137	939	27	9	18	0	0	0
Landscape Architecture	1,014	674	340	264	150	114	0	0	0
Urban Architecture	6	4	2	118	95	23	4	3	1
City, Community, & Regional Planning	505	368	137	1,095	677	418	38	24	14
Other	369	289	80	102	46	56	3	12	1
AREA STUDIES, TOTAL	2,509	902	1,607	750	380	370	98	55	43
Asian Studies, General	177	77	100	82	44	38	3	2	1
East Asian Studies	211	81	130	68	36	32	11	7	4
South Asian (India, etc.) Studies	11	7	4	7	4	3	2	2	0
Southeast Asian Studies	5	3	2	12	12	0	0	0	0
African Studies	17	7	10	16	8	8	2	2	0
Islamic Studies	0	0	0	0	0	0	0	0	0
Russian & Slavic Studies	77	40	37	27	19	8	1	1	0
Latin American Studies	243	93	150	130	73	57	2	1	1
Middle Eastern Studies	35	12	23	61	39	22	10	7	3
European Studies, General	54	15	39	3	1	2	0	0	0
Eastern European Studies	22	9	13	29	26	3	0	0	0
West European Studies	58	13	45	14	6	8	0	0	0
American Studies	1,251	427	824	208	74	134	56	27	29
Pacific Area Studies	2	2	0	9	4	5	0	0	0
Other	346	116	230	84	34	50	11	6	5
BIOLOGICAL SCIENCES, TOTAL	41,639	22,754	18,885	5,874	3,426	2,448	3,743	2,654	1,089
Biology, General	29,651	15,931	13,720	2,579	1,545	1,034	678	452	226
Botany General	563	272	291	252	129	123	183	131	52
Bacteriology	162	68	94	40	22	18	12	8	4
Plant Pathology	58	32	26	131	93	38	97	75	22
Plant Pharmacology	0	0	0	0	0	0	0	0	0
Plant Physiology	97	62	35	17	9	8	23	18	5
Zoology, General	3,089	1,802	1,287	413	229	184	223	167	56
Pathology, Human & Animal	23	8	15	90	46	44	103	72	31
Pharmacology, Human & Animal	26	19	7	70	46	24	208	147	61
Physiology, Human & Animal	340	191	149	199	143	56	244	185	59
Microbiology	2,215	1,063	1,152	430	232	198	338	242	96
Anatomy	61	40	21	63	36	27	147	91	56
Histology	0	0	0	1	0	1	1	0	1
Biochemistry	1,865	1,197	668	273	169	104	462	345	117
Biophysics	48	39	9	26	17	9	73	61	12
Molecular Biology	272	170	102	26	13	13	95	59	36
Cell Biology	40	18	22	20	13	7	49	33	16

SOURCE: National Center for Education Statistics, Unpublished

TABLE 2-14

BACHELOR'S, MASTER'S AND DOCTORAL DEGREES CONFERRED BY SEX AND FIELD, 1981-82

(Continued)

DISCIPLINE DIVISION & SPECIALTY	BACHELOR'S DEGREES			MASTER'S DEGREES			DOCTOR'S DEGREES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
BIOLOGICAL SCIENCES TOTAL, Continued									
Marine Biology	488	319	169	70	49	21	13	11	2
Biometrics & Biostatistics	31	16	15	103	46	57	52	42	10
Ecology	792	464	328	236	158	78	76	63	13
Entomology	186	145	41	256	193	63	158	139	19
Genetics	106	50	56	107	38	69	123	77	46
Radiobiology	0	0	0	20	15	5	8	6	2
Nutrition, Scientific	138	32	106	195	42	153	81	43	38
Neurosciences	76	35	41	12	9	3	51	32	19
Toxicology	49	25	24	57	37	20	24	16	8
Embryology	0	0	0	0	0	0	0	0	0
Other	1,263	756	507	188	97	91	221	139	82
BUSINESS & MANAGEMENT, TOTAL	215,817	131,099	84,718	61,428	44,359	17,069	857	705	152
Business & Commerce, General	37,326	22,631	14,695	9,144	6,601	2,543	155	125	30
Accounting	45,542	26,213	19,329	3,246	2,160	1,086	61	53	8
Business Statistics	357	209	148	96	70	26	11	8	3
Banking & Finance	14,383	9,991	4,392	4,631	3,438	1,193	35	32	3
Investments & Securities	236	159	77	111	89	22	0	0	0
Business Management & Administration	74,496	46,899	27,597	36,925	27,044	9,881	424	342	82
Operations Research	627	406	221	536	436	100	40	36	4
Hotel & Restaurant Management	2,169	1,419	750	97	66	31	2	2	0
Marketing & Purchasing	26,945	15,108	11,837	2,022	1,241	781	24	20	4
Transportation & Public Utilities	1,816	1,431	385	129	116	13	2	1	1
Real Estate	774	615	159	103	81	22	2	2	0
Insurance	613	466	147	46	32	14	4	3	1
International Business	571	295	276	1,429	946	483	5	5	0
Secretarial Studies	1,527	62	1,465	4	2	2	0	0	0
Personnel Management	2,430	1,288	1,142	473	297	176	4	2	2
Labor & Industrial Relations	1,629	947	682	1,009	626	383	17	12	5
Business Economics	2,712	1,868	844	341	267	74	55	49	6
Other	1,664	1,092	572	1,086	847	239	16	13	3
COMMUNICATIONS	34,222	14,917	19,305	3,327	1,578	1,749	200	136	64
Communications, General	15,567	6,419	9,148	1,727	766	961	139	94	45
Journalism	8,841	3,408	5,433	901	440	461	27	18	9
Radio - Television	5,366	3,081	2,285	256	139	117	11	8	3
Advertising	2,228	791	1,437	145	59	86	0	0	0
Communication Media	1,794	970	824	223	128	95	18	12	6
Other	426	248	178	75	46	29	5	4	1
COMPUTER & INFORMATION SCIENCES, TOTAL	20,267	13,218	7,049	4,935	3,625	1,310	251	230	21
Computer & Info. Sciences, General	16,368	10,870	5,498	4,268	3,156	1,112	241	221	20
Information Sciences & Systems	2,433	1,458	975	541	368	173	10	9	1
Data Processing	960	564	396	28	23	5	0	0	0
Computer Programming	231	144	87	40	29	11	0	0	0
Systems Analysis	217	145	72	52	43	9	0	0	0
Other	58	37	21	6	6	0	0	0	0
EDUCATION, TOTAL	101,063	24,385	76,678	93,104	25,771	67,333	7,676	3,949	3,727
Education, General	3,157	520	2,637	11,667	3,166	8,501	1,360	687	673
Elementary Education, General	37,261	3,141	34,120	12,788	1,345	11,443	201	73	128
Secondary Education, General	2,419	923	1,496	4,498	1,710	2,788	175	78	97
Junior High School Education	301	65	236	249	37	212	12	9	3
Higher Education, General	38	7	31	400	172	228	429	253	176
Junior & Community College Education	0	0	0	181	90	91	66	38	28
Adult & Continuing Education	70	15	55	956	296	660	143	62	81
Special Education, General	8,217	635	7,582	9,157	1,229	7,928	253	89	164
Administration of Special Education	0	0	0	44	11	33	19	9	10
Education of the Mentally Retarded	1,394	100	1,294	403	66	337	9	6	3
Education of the Gifted	25	0	25	166	20	146	4	1	3
Education of the Deaf	344	9	335	398	51	347	3	0	3
Education of the Culturally Disadvantaged	9	2	7	60	15	45	0	0	0
Education of the Visually Handicapped	64	9	55	146	36	110	1	0	1
Speech Correction	1,120	50	1,070	443	26	417	1	0	1
Education of the Emotionally Disturbed	425	29	396	353	68	285	6	2	4
Remedial Education	52	4	48	82	8	74	0	0	0

SOURCE: National Center for Education Statistics, Unpublished

TABLE 2-14

BACHELOR'S, MASTER'S AND DOCTORAL DEGREES CONFERRED BY SEX AND FIELD, 1981-82
(Continued)

DISCIPLINE DIVISION & SPECIALTY	BACHELOR'S DEGREES			MASTER'S DEGREES			DOCTOR'S DEGREES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
EDUCATION TOTAL, Continued									
Special Learning Disabilities	792	46	746	1,573	158	1,415	22	8	14
Education of the Physically Handicapped	122	21	101	78	16	62	4	0	4
Education of the Multiple Handicapped	54	9	45	142	23	119	0	0	0
Social Foundations	42	12	30	336	125	211	187	96	91
Educational Psychology	181	22	159	2,156	614	1,542	681	338	343
Pre-Elementary Education	4,183	104	4,079	1,383	56	1,327	54	13	41
Educational Statistics & Research	0	0	0	57	25	32	49	21	28
Educational Testing, Eval. & Measurement	4	3	1	160	32	128	15	10	5
Student Personnel	169	51	118	12,246	3,607	8,639	624	321	303
Educational Administration	34	12	22	9,019	4,844	4,175	1,423	868	555
Educational Supervision	57	20	37	1,674	667	1,007	51	20	31
Curriculum & Instruction	247	13	234	3,701	946	27,755	742	334	408
Reading Education	227	14	213	5,470	422	5,048	123	31	92
Art Education	1,897	365	1,532	673	182	491	43	18	25
Music Education	4,915	2,036	2,879	1,084	509	575	89	53	36
Mathematics Education	629	243	386	347	134	213	32	22	10
Science Education	558	234	324	406	202	204	59	40	19
Physical Education	17,391	8,545	8,846	4,077	2,162	1,915	226	137	89
Driver & Safety Education	125	105	20	220	173	47	6	6	0
Health Education	2,175	525	1,650	845	191	654	72	31	41
Business, Commerce, & Distributive Ed.	3,167	605	2,562	1,067	205	862	57	27	30
Industrial Arts, Vocation & Tech. Ed.	5,525	4,687	838	2,133	1,432	701	252	166	86
Agricultural Education	835	668	167	257	226	31	28	26	2
Ed. of Excep. Children (Not Above)	186	20	166	152	26	126	3	1	2
Home Economics Education	1,442	18	1,424	356	7	349	14	0	14
Nursing Education	108	1	107	9	0	9	0	0	0
Other	1,102	497	605	1,492	441	1,051	138	55	83
ENGINEERING, TOTAL	80,005	70,899	9,106	17,939	16,311	1,628	2,636	2,496	140
Engineering, General	4,318	3,685	633	1,497	1,346	151	316	297	19
Aerospace, Aero- & Astronautical Eng.	2,120	1,949	171	521	482	39	96	95	1
Agricultural Engineering	838	779	59	129	123	6	38	38	0
Architectural Engineering	438	375	63	46	44	2	0	0	0
Bioengineering & Biomedical Engineering	508	368	140	236	193	43	50	45	5
Chemical Engineering	6,740	5,273	1,467	1,285	1,104	181	311	292	19
Petroleum Engineering	1,245	1,119	126	122	116	6	21	19	2
Civil, Construction, & Transpo. Eng.	10,524	9,333	1,191	2,995	2,725	270	329	315	14
Elec., Electronics, Communications Eng.	16,455	15,046	1,409	4,462	4,174	288	526	505	21
Mechanical Engineering	13,922	12,702	1,220	2,399	2,260	139	333	320	13
Geological Engineering	269	215	54	31	29	2	2	2	0
Geophysical Engineering	73	64	9	4	4	0	0	0	0
Industrial & Management Engineering	3,992	3,049	943	1,656	1,446	210	116	103	13
Metallurgical Engineering	592	494	98	262	235	27	59	59	0
Materials Engineering	798	629	169	282	246	36	129	114	15
Ceramic Engineering	258	207	51	65	58	7	12	12	0
Textile Engineering	44	27	17	0	0	0	1	1	0
Mining & Mineral Engineering	662	614	48	88	85	3	10	10	0
Engineering Physics	302	267	35	46	44	2	14	13	1
Nuclear Engineering	394	359	35	325	287	38	124	118	6
Engineering Mechanics	327	281	46	140	128	12	62	58	4
Environmental & Sanitary Engineering	272	212	60	412	332	80	39	37	2
Naval Architecture & Marine Engineering	606	590	16	81	80	1	1	1	0
Ocean Engineering	202	179	23	116	108	8	11	10	1
Engineering Technologies	12,984	12,109	875	413	358	55	15	13	2
Other	1,122	974	148	326	304	22	21	19	2
FINE AND APPLIED ARTS, TOTAL	40,422	14,819	25,603	8,746	3,866	4,880	670	380	290
Fine Arts, General	3,834	1,263	2,571	557	221	336	40	13	27
Art	11,515	3,646	7,869	1,873	817	1,056	12	4	8
Art History & Appreciation	1,975	355	1,620	410	73	337	95	31	64
Music (Performing, Composition, Theory)	5,138	2,476	2,662	2,596	1,249	1,347	298	209	89
Music (Liberal Arts Program)	3,137	1,455	1,682	660	329	331	79	51	28

SOURCE: National Center for Education Statistics, Unpublished

TABLE 2-14

BACHELOR'S, MASTER'S AND DOCTORAL DEGREES CONFERRED BY SEX AND FIELD, 1981-82

(Continued)

DISCIPLINE DIVISION & SPECIALTY	BACHELOR'S DEGREES			MASTER'S DEGREES			DOCTOR'S DEGREES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
FINE AND APPLIED ARTS TOTAL, Continued									
Music History & Appreciation	143	78	65	105	40	65	29	16	13
Dramatic Arts	5,286	2,159	3,127	1,258	603	655	93	45	48
Dance	795	76	719	269	65	204	4	1	3
Applied Design	4,747	1,482	3,265	347	138	209	1	0	1
Cinematography	692	478	214	159	103	56	8	4	4
Photography	1,068	671	397	84	52	32	0	0	0
Other	2,092	680	1,412	428	176	252	11	6	5
FOREIGN LANGUAGES, TOTAL	9,841	2,394	7,447	2,008	609	1,399	536	242	294
Foreign Languages, General	720	195	525	324	107	217	121	62	59
French	3,054	527	2,527	485	112	373	92	38	54
German	1,327	447	880	324	127	197	76	34	42
Italian	208	43	165	55	16	39	14	6	8
Spanish	3,633	806	2,827	568	141	427	140	59	81
Russian	324	140	184	49	17	32	7	0	7
Chinese	68	33	35	14	2	12	10	6	4
Japanese	100	43	57	16	6	10	3	3	0
Latin	86	34	52	10	3	7	2	2	0
Greek, Classical	82	48	34	7	2	5	3	3	0
Hebrew	44	17	27	30	19	11	1	1	0
Arabic	15	3	12	4	2	2	4	2	2
Indian (Asiatic)	4	3	1	6	3	3	7	2	5
Scandinavian Languages	31	4	27	8	5	3	2	0	2
Slavic Languages (other than Russian)	48	17	31	30	14	16	18	7	11
African Languages (non-Semitic)	1	1	0	4	2	2	7	4	3
Other	96	33	63	74	31	43	29	13	16
HEALTH PROFESSIONS, TOTAL	63,653	10,105	53,548	16,503	4,006	12,497	925	503	422
Health Professions, General	4,862	1,456	3,406	868	311	557	75	54	21
Hospital & Health Care Administration	1,978	581	1,397	1,640	835	805	20	15	5
Nursing	33,177	1,695	31,482	5,312	278	5,034	134	6	128
Dental Specialties	0	0	0	359	307	52	9	7	2
Medical Specialties	5	2	3	147	50	97	49	34	15
Occupational Therapy	1,663	78	1,585	255	20	235	0	0	0
Optometry	396	305	91	9	9	0	2	1	1
Pharmacy	6,367	3,437	2,930	368	233	135	127	106	21
Physical Therapy	2,736	536	2,200	317	84	233	0	0	0
Dental Hygiene	1,167	20	1,147	21	0	21	0	0	0
Public Health	705	228	477	2,312	972	1,340	207	105	102
Medical Record Librarianship	612	24	588	5	0	5	0	0	0
Podiatry or Podiatric Medicine	0	0	0	2	0	0	0	0	0
Biomedical Communication	32	17	15	14	4	10	0	0	0
Veterinary Medicine Specialties	0	0	0	184	126	58	65	54	11
Speech Pathology and Audiology	3,414	179	3,235	3,104	209	2,895	114	47	67
Chiropractic	64	53	11	0	0	0	0	0	0
Clinical Social Work	268	41	227	561	163	398	15	4	11
Medical Laboratory Technologies	4,596	812	3,784	207	76	131	4	1	3
Dental Technologies	5	4	1	13	11	2	0	0	0
Radiologic Technologies	453	182	271	34	24	10	4	3	1
Other	1,153	455	698	771	292	479	100	66	34
HOME ECONOMICS, TOTAL	17,872	1,016	16,856	2,355	201	2,154	247	73	174
Home Economics, General	5,535	138	5,397	753	23	730	83	14	69
Home Decoration & Home Equipment	838	56	782	18	1	17	0	0	0
Clothing & Textiles	3,270	72	3,198	90	5	93	18	0	18
Consumer Economics & Home Management	647	50	597	73	4	69	6	0	6
Family Relations & Child Development	3,005	151	2,854	515	93	422	86	35	51
Foods & Nutrition	3,082	198	2,884	749	58	691	41	17	24
Institutional & Cafeteria Management	607	292	315	30	2	28	0	0	0
Other	888	59	829	119	15	104	13	7	6
LAW, TOTAL	846	416	430	1,893	1,510	383	22	20	2
Law, General	592	300	292	1,468	1,163	305	22	20	2
Other	254	116	138	425	347	78	0	0	0

SOURCE: National Center for Education Statistics, Unpublished

TABLE 2-14

BACHELOR'S, MASTER'S AND DOCTORAL DEGREES CONFERRED BY SEX AND FIELD, 1981-82
(Continued)

DISCIPLINE DIVISION & SPECIALTY	BACHELOR'S DEGREES			MASTER'S DEGREES			DOCTOR'S DEGREES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
LETTERS, TOTAL	40,693	15,986	24,707	8,226	3,126	5,100	1,681	915	766
English, General	22,988	7,449	15,539	3,787	1,275	2,512	730	335	395
Literature, English	1,975	756	1,219	415	145	270	81	46	35
Comparative Literature	341	114	227	179	67	112	115	44	71
Classics	381	189	192	133	62	71	48	30	18
Linguistics	534	158	376	516	211	305	164	86	78
Speech, Debate, & Forensic Science	6,646	2,549	4,097	992	306	686	144	68	76
Creative Writing	467	184	283	295	149	146	0	0	0
Teaching English as a Foreign Language	50	17	33	653	182	471	4	1	3
Philosophy	3,391	2,408	983	445	324	121	247	190	57
Religious Studies	2,918	1,800	1,118	707	364	343	117	97	20
Other	1,002	362	640	104	41	63	31	18	13
LIBRARY SCIENCE, TOTAL	307	43	264	4,506	799	3,707	84	31	53
Library Science, General	282	33	249	4,385	773	3,612	82	29	53
Other	25	10	15	121	26	95	2	2	0
MATHEMATICS, TOTAL	11,599	6,593	5,006	2,727	1,821	906	681	587	94
Mathematics, General	10,450	5,815	4,635	1,927	1,234	693	512	450	62
Statistics, Mathematical & Theoretical	258	152	106	479	334	145	125	100	25
Applied Mathematics	560	377	183	236	188	48	34	32	2
Other	331	249	82	85	65	20	10	5	5
MILITARY SCIENCES, TOTAL	283	262	21	49	48	1	0	0	0
Military Science, (Army)	6	6	0	49	48	1	0	0	0
Naval Science (Navy, Marines)	3	3	0	0	0	0	0	0	0
Aerospace Science (Air Force)	19	19	0	0	0	0	0	0	0
Merchant Marine	228	207	21	0	0	0	0	0	0
Other	27	27	0	0	0	0	0	0	0
PHYSICAL SCIENCES, TOTAL	24,052	17,866	6,186	5,514	4,318	1,196	3,286	2,835	451
Physical Sciences, General	765	589	176	131	93	38	24	21	*
Physics, General	3,472	3,012	460	1,282	1,126	156	863	799	64
Molecular Physics	0	0	0	0	0	0	1	1	0
Nuclear Physics	0	0	0	2	2	0	9	7	2
Chemistry, General	11,025	7,543	3,482	1,618	1,163	455	1,595	1,336	259
Inorganic Chemistry	0	0	0	5	5	0	14	11	3
Organic Chemistry	4	2	2	19	17	2	35	30	5
Physical Chemistry	10	9	1	23	20	3	23	20	3
Analytical Chemistry	16	12	4	18	10	8	15	13	2
Pharmaceutical Chemistry	7	5	2	68	44	24	40	31	9
Astronomy	81	65	16	61	51	10	66	52	14
Astrophysics	32	27	5	19	18	1	10	10	0
Atmospheric Sciences & Meteorology	412	346	66	164	140	24	45	41	4
Geology	5,337	3,967	1,370	1,411	1,088	323	241	197	44
Geochemistry	8	6	2	13	10	3	4	4	0
Geophysics & Seismology	193	150	43	116	98	18	37	31	6
Earth Sciences, General	886	604	282	136	101	35	59	49	10
Paleontology	1	1	0	6	4	2	5	3	2
Oceanography	220	177	43	166	119	47	98	84	14
Metallurgy	48	42	6	23	21	2	24	23	1
Other Earth Sciences	263	182	81	100	71	29	29	25	4
Other Physical Sciences	1,272	1,127	145	133	117	16	49	47	2
PSYCHOLOGY, TOTAL	41,031	13,623	27,408	7,791	3,209	4,582	2,780	1,518	1,262
Psychology, General	39,251	13,034	26,217	4,448	1,938	2,510	1,845	1,038	807
Experimental Psychology	237	96	141	98	44	54	69	34	35
Clinical Psychology	81	33	48	663	300	363	555	282	273
Psychology for Counseling	218	55	163	1,861	651	1,210	163	86	77
Social Psychology	441	176	265	203	94	109	39	20	19
Psychometrics	0	0	0	29	6	23	5	2	3
Statistics in Psychology	5	2	3	16	8	8	3	1	2
Industrial Psychology	57	19	38	141	66	75	13	11	2
Developmental Psychology	231	20	211	160	54	106	63	31	32
Physiological Psychology	83	41	42	5	3	2	19	10	9
Other	427	147	280	167	45	122	6	3	3

SOURCE: National Center for Education Statistics, Unpublished

TABLE 2-14

BACHELOR'S, MASTER'S AND DOCTORAL DEGREES CONFERRED BY SEX AND FIELD, 1981-82
(Continued)

DISCIPLINE DIVISION & SPECIALTY	BACHELOR'S DEGREES			MASTER'S DEGREES			DOCTOR'S DEGREES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
PUBLIC AFFAIRS & SERVICES, TOTAL	34,428	13,953	20,475	19,388	8,285	11,103	429	249	14
Community Services, General	1,469	498	971	473	243	230	36	16	20
Public Administration	2,122	1,308	814	6,503	4,139	2,364	134	97	37
Parks & Recreation Management	5,335	2,006	3,329	526	276	250	33	26	7
Social Work & Helping Services	11,813	1,867	9,946	9,959	2,295	7,664	198	90	108
Law Enforcement & Corrections	12,438	7,686	4,752	1,336	974	362	24	14	10
International Public Service	160	85	75	110	60	50	0	0	0
Other	1,091	503	588	481	298	183	4	2	2
SOCIAL SCIENCES, TOTAL	99,898	55,241	44,657	11,951	7,438	4,513	3,065	2,240	825
Social Sciences, General	7,954	3,667	4,287	1,107	613	494	66	51	15
Anthropology	3,069	1,124	1,945	826	418	408	334	191	143
Archaeology	72	23	49	23	3	20	11	3	8
Economics	19,876	13,424	6,452	1,964	1,481	483	677	581	96
History	17,146	10,706	6,440	2,210	1,330	880	636	455	181
Geography	3,445	2,366	1,079	553	393	160	123	101	22
Political Science & Government	25,658	15,883	9,775	1,954	1,344	610	513	401	112
Sociology	16,042	4,771	11,271	1,145	519	626	558	351	207
Criminology	2,051	1,184	867	289	245	44	11	5	6
International Relations	2,336	1,124	1,212	1,075	687	388	56	47	9
Afro-American (Black Culture) Studies	219	84	135	46	27	19	3	3	0
American Indian Cultural Studies	24	12	12	0	0	0	1	0	1
Mexican-American Cultural Studies	110	34	76	13	3	10	0	0	0
Urban Studies	1,122	514	608	589	325	264	30	21	9
Demography	9	3	6	24	14	10	10	8	2
Other	765	322	443	133	36	97	36	22	14
THEOLOGY, TOTAL	5,998	4,461	1,537	4,064	2,650	1,414	1,288	1,185	103
Theological Professions, General	3,464	2,964	500	2,266	1,662	604	1,160	1,075	85
Religious Music	317	205	112	183	139	44	10	9	1
Biblical Languages	78	64	14	56	48	8	6	5	1
Religious Education	1,561	805	756	1,284	647	637	44	42	2
Other	578	423	155	275	154	121	68	54	14
INTERDISCIPLINARY STUDIES, TOTAL	35,796	17,144	18,652	4,978	2,840	2,138	393	242	151
General Liberal Arts & Sciences	18,145	8,003	10,142	1,094	426	668	55	20	15
Biological & Physical Sciences	3,125	1,956	1,169	253	171	82	31	18	13
Humanities & Social Sciences	2,944	1,104	1,840	1,331	677	654	120	70	50
Engineering & Other Disciplines	379	311	68	1,060	949	111	31	28	3
Other	11,203	5,770	5,433	1,240	617	623	176	106	70

Source: Data on Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity and Sex, Academic Year 1980-81, U.S. Dept. of Education, Office for Civil Rights

TABLE 2-15

DEGREES BY RACE, ETHNICITY, SEX AND FIELD, 1980-81

Major Field of Study	Total	White non-Hispanic		Black non-Hispanic		Hispanic		Asian/Pac. Islander		Am. Indian/ Alaskan Nat.		Nonresident Alien	
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
BACHELOR'S DEGREES													
ALL FIELDS	934,600	406,173	401,146	24,511	36,162	10,810	11,022	10,107	8,687	1,700	1,893	16,324	6,265
Agric./Nat. Resources	21,886	13,908	6,326	259	121	181	67	200	112	81	15	525	91
Architec./Environ. Design	9,455	5,778	2,291	210	90	203	67	217	79	20	4	372	124
Area Studies	2,585	900	1,342	20	47	41	63	39	79	3	1	28	22
Biological Sciences	43,216	21,085	16,191	954	1,315	648	496	830	659	67	70	565	336
Business/Management	200,857	112,267	61,931	6,503	6,897	2,560	1,554	2,121	1,822	388	248	3,219	1,347
Communications	31,282	12,541	14,932	980	1,425	258	299	153	215	51	59	196	173
Computer/Inform. Sciences	15,120	8622	3,943	394	392	193	109	410	259	17	4	566	211
Education	108,265	22,876	70,848	2,587	6,907	754	2,093	258	465	164	405	430	478
Engineering	74,954	54,453	6,395	2,020	429	1,302	131	2,699	367	173	22	6,608	355
Fine & Applied Arts	40,241	12,768	23,165	811	1,024	345	434	289	499	73	114	338	381
Foreign Languages	10,319	2,067	6,547	76	217	258	651	39	171	10	15	70	198
Health Professions	63,649	9,276	47,514	436	3,167	262	891	299	1,013	39	170	207	375
Home Economics	18,370	745	15,515	83	1,042	17	213	41	354	1	72	29	258
Law	776	368	363	9	13	4	6	2	3	1	1	4	2
Letters	40,028	14,748	21,567	666	1,314	278	416	167	293	44	59	204	272
Library Science	375	18	321	2	28	1	-	-	2	1	1	-	1
Mathematics	11,078	5,422	4,023	276	308	113	72	223	168	10	8	298	157
Military Sciences	305	278	11	5	1	3	-	4	-	1	-	2	-
Physical Sciences	23,950	16,124	5,122	613	293	297	108	412	184	44	21	572	160
Psychology	40,833	12,215	22,486	1,040	2,268	490	815	293	546	68	128	189	295
Public Affairs/Services	36,311	12,476	16,834	1,726	3,143	590	586	187	229	91	133	196	120
Social Sciences	100,647	48,509	37,026	3,696	4,433	1,549	1,339	860	785	241	233	1,301	675
Theology	5,807	3,964	1,388	142	24	74	14	43	15	5	-	106	32
Interdisciplinary Studies	34,491	14,765	15,065	1,003	1,264	389	598	321	368	107	110	299	202
MASTER'S DEGREES													
ALL FIELDS	294,183	115,562	125,654	6,158	10,975	3,085	3,376	3,773	2,509	501	533	16,587	5,470
Agric./Nat. Resources	4,003	2,298	785	53	20	50	13	50	17	4	3	606	104
Architec./Environ. Design	3,153	1,667	724	74	48	52	13	75	37	4	1	362	96
Area Studies	718	260	272	2	12	18	21	11	27	3	3	41	48
Biological Sciences	5,978	3,223	1,987	82	89	36	33	62	83	9	6	242	126
Business/Management	57,541	35,380	12,094	1,554	805	676	193	1,161	472	128	27	4,146	905
Communications	3,105	1,183	1,373	65	122	24	19	30	36	3	6	143	101
Computer/Inform. Sciences	4,143	2,153	665	52	18	45	15	205	74	10	2	711	193
Education	98,380	23,291	59,488	2,061	6,584	869	1,962	291	682	159	294	1,408	1,291
Engineering	16,358	9,177	970	222	38	251	27	974	105	26	5	4,348	215
Fine & Applied Arts	8,629	3,534	4,090	149	118	77	55	68	92	9	13	219	205
Foreign Languages	2,104	541	1,095	10	23	60	114	7	19	1	7	75	152
Health Professions	16,515	3,443	10,732	197	692	86	165	164	284	17	37	409	289
Home Economics	2,570	193	1,998	11	121	5	26	7	56	1	9	35	108

TABLE 2-15 (continued)

DEGREES BY RACE, ETHNICITY, SEX AND FIELD, 1980-81

Major Field of Study	Total	White non-Hispanic		Black non-Hispanic		Hispanic		Asian/Pac. Islander		Am. Indian/ Alaskan Nat.		Nonresident Alien	
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
MASTER'S DEGREES continued													
Law	1,832	1,129	237	27	11	42	10	32	5	1	-	275	63
Letters	8,301	2,768	4,440	72	178	48	83	44	70	8	10	289	291
Library Science	4,859	733	3,591	33	183	9	49	13	56	1	16	52	123
Mathematics	2,565	1,212	678	33	34	31	9	64	33	6	1	344	120
Physical Sciences	5,227	3,255	860	79	28	45	10	115	38	9	2	641	145
Psychology	7,998	2,945	4,071	164	260	78	101	34	43	13	19	124	146
Public Affairs/Services	20,074	7,212	9,223	713	1,180	310	319	149	157	47	45	526	193
Social Sciences	11,917	5,571	3,579	311	304	181	99	147	86	28	16	1,204	391
Theology	3,728	2,119	1,163	58	13	36	14	39	16	1	-	208	61
Interdisciplinary Studies	4,485	2,275	1,539	136	94	56	26	31	21	13	11	179	104
PH.D. DEGREES*													
ALL FIELDS	32,839	17,310	8,598	694	571	277	179	655	222	95	35	3,564	639
Agric./Nat. Resources	1,067	577	87	14	1	14	-	22	7	2	-	311	32
Architec/Environ. Design	93	39	17	5	1	2	-	5	-	-	-	22	2
Area Studies	157	73	51	6	-	1	-	5	1	1	-	14	5
Biological Sciences	3,718	2,288	889	36	28	30	10	93	47	5	3	214	75
Business/Management	844	519	100	26	6	1	1	19	6	5	-	149	12
Communications	182	84	63	3	7	-	-	2	-	1	-	17	5
Computer/infor. Sciences	252	162	22	1	-	-	-	14	-	1	-	49	3
Education	7,900	3,299	3,092	289	325	66	74	48	57	41	16	421	172
Engineering	2,551	1,296	56	23	1	22	1	182	9	5	-	919	37
Fine/Applied Arts	654	353	234	12	5	2	2	3	4	1	1	25	12
Foreign Languages	588	205	265	4	5	19	18	5	-	1	-	40	26
Health Professions	842	380	309	9	17	3	5	18	7	3	3	62	26
Home Economics	247	65	141	3	6	-	1	1	5	-	1	9	15
Law	60	37	3	1	-	1	-	-	-	-	-	17	1
Letters	1,790	854	695	28	28	6	8	16	6	5	2	101	41
Library Science	71	22	29	3	6	-	1	1	2	-	-	5	2
Mathematics	728	422	85	6	3	4	2	24	7	2	-	156	17
Physical Sciences	3,140	2,153	292	28	4	21	2	90	16	3	1	469	61
Psychology	2,955	1,488	1,149	62	54	34	31	18	15	7	3	72	22
Public Affairs/Services	433	205	125	15	33	6	4	6	5	1	1	23	5
Social Sciences	3,119	1,751	714	66	34	37	15	48	24	9	3	361	57
Theology	1,169	903	90	45	-	7	-	33	-	1	-	82	8
Interdisciplinary Studies	279	135	90	5	7	1	4	2	4	1	1	26	3

* Includes Ed.D. and comparable degrees at the doctoral level. Excludes first-professional degrees.

NOTE: This tabulation excludes 116 men and 3 women whose racial/ethnic group was not reported.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, 1982 and Earned Degrees, 1982, National Center for Education Statistics, Unpublished

TABLE 2-16

GRADUATE DEGREE ATTAINMENT RATES, BY SEX, 1970-82

Bachelor's		Master's		Attainment	Bachelor's		Ph.D.s		Attainment
Year	Number	Year	Number	Rate	Year	Number	Year	Number	Rate
				Men					
1970	195,244	1972	44,010	22.5	1965	128,723	1972	16,906	13.1
1971	198,180	1973	44,474	22.4	1966	133,989	1973	16,551	12.4
1972	203,557	1974	43,630	21.4	1967	143,847	1974	15,706	10.7
1973	211,552	1975	42,847	20.3	1968	158,711	1975	15,522	9.8
1974	213,269	1976	42,675	20.0	1969	181,323	1976	14,883	8.2
1975	201,578	1977	43,577	21.6	1970	195,244	1977	14,311	7.3
1976	196,577	1978	42,547	21.6	1971	198,180	1978	13,735	6.9
1977	191,090	1979	40,416	21.2	1972	203,557	1979	13,662	6.7
1978	188,107	1980	40,010	21.3	1973	211,552	1980	13,398	6.3
1979	186,333	1981	39,797	21.4	1974	213,269	1981	13,602	6.4
1980	186,009	1982	40,020	21.5	1975	201,578	1982	13,479	6.7
				Women					
1970	68,878	1972	9,557	13.9	1965	36,213	1972	2,103	5.8
1971	72,996	1973	9,760	13.4	1966	39,482	1973	2,450	6.2
1972	77,671	1974	10,545	13.6	1967	44,002	1974	2,607	5.9
1973	83,839	1975	11,005	13.1	1968	53,463	1975	2,836	5.3
1974	91,793	1976	12,072	13.2	1969	63,196	1976	2,981	4.7
1975	93,342	1977	13,154	14.1	1970	68,878	1977	3,107	4.5
1976	95,597	1978	13,690	14.3	1971	72,996	1978	3,313	4.5
1977	97,453	1979	14,040	14.4	1972	77,671	1979	3,583	4.6
1978	100,060	1980	14,383	14.4	1973	83,839	1980	3,801	4.5
1979	102,292	1981	15,014	14.7	1974	91,793	1981	4,021	4.4
1980	105,974	1982	15,768	14.9	1975	93,342	1982	4,135	4.4

SOURCE: Series of Earned Degrees Conferred, National Center for Education Statistics; and Series of Doctorate Recipients from U.S. Universities, National Academy of Sciences

TABLE 2-17

NUMBER AND PROPORTION OF DEGREES IN SCIENCE EARNED BY WOMEN, 1960-1982

FIELD	BACHELOR'S DEGREES			DOCTORATES		
	TOTAL	WOMEN	% W	TOTAL	WOMEN	% W
Social Sciences*	1,420,805	518,224	36.5	43,595	7,641	17.1
Psychology	725,471	377,678	52.1	45,832	16,526	36.1
Life Sciences	1,077,654	319,072	29.6	74,319	13,360	18.0
Math/Stat/Comp.	495,993	176,075	35.5	23,804	2,136	9.0
Physical Science	417,878	73,879	17.7	75,104	5,216	6.9
TOTAL SCIENCE	4,137,801	1,464,928	35.4	262,654	44,879	17.1
Engineering	1,004,206	39,749	4.0	56,913	819	1.4
TOTAL SCIENCE & ENG.	5,142,007	1,504,677	29.3	319,567	45,698	14.3

*Sociology, Anthropology, Economics, Political Science and Government

SOURCE: Earned Degrees Conferred Series, 1965-1982 National Center for Education Statistics; using National Science Foundation Field Definitions

TABLE 2-18

SCIENCE AND ENGINEERING MASTER'S DEGREES BY SEX AND YEAR, 1965-1982

YEAR	ALL MASTER'S DEGREES					
	Total	Physical Sciences[1]	Engineering	Mathematical/ Computer Sciences	Life Sciences	Social Sciences[2]
1965	33,835	4,918	12,056	4,294	5,978	6,589
1966	38,083	4,992	13,678	5,010	6,666	7,737
1967	41,800	5,412	13,885	5,733	7,465	9,305
1968	45,425	5,508	15,188	6,081	8,315	10,333
1969	48,425	5,911	15,243	6,735	8,809	11,727
1970	49,318	5,948	15,597	7,107	8,590	12,076
1971	50,624	6,386	16,347	6,789	8,320	12,782
1972	53,567	6,307	16,802	7,186	8,914	14,358
1973	54,234	6,274	16,758	7,146	9,080	14,976
1974	54,175	6,087	15,393	7,116	9,605	15,974
1975	53,852	5,830	15,434	6,637	9,618	16,333
1976	54,747	5,485	16,170	6,466	9,823	16,803
1977	56,731	5,345	16,889	6,496	10,707	17,294
1978	56,237	5,576	17,015	6,421	10,711	16,514
1979	54,456	5,464	16,193	6,101	10,719	15,979
1980	54,391	5,233	16,846	6,515	10,278	15,519
1981	54,811	5,300	17,373	6,787	9,731	15,620
1982	55,788	5,514	17,526	7,662	9,755	15,331
	DEGREES AWARDED TO WOMEN					
1965	4,082	513	44	812	1,162	1,551
1966	4,882	528	76	1,018	1,380	1,880
1967	5,717	553	78	1,310	1,517	2,259
1968	6,512	635	99	1,361	1,864	2,553
1969	7,314	668	113	1,566	2,016	2,951
1970	8,577	847	172	1,809	2,216	3,533
1971	8,658	853	187	1,688	2,190	3,740
1972	9,557	888	281	1,777	2,327	4,284
1973	9,760	847	288	1,730	2,237	4,658
1974	10,545	887	362	1,793	2,410	5,093
1975	11,005	848	396	1,766	2,411	5,584
1976	12,072	825	589	1,690	2,619	6,349
1977	13,154	887	733	1,766	3,011	6,757
1978	13,690	946	871	1,717	3,226	6,930
1979	14,040	992	990	1,632	3,460	6,966
1980	14,383	975	1,190	1,800	3,326	7,092
1981	15,014	1,087	1,406	1,848	3,280	7,393
1982	15,768	1,196	1,573	2,216	3,472	7,311

[1] Includes environmental science

[2] Includes psychology

SOURCE: Series of Earned Degrees Conferred, 1965-1982, National Center for Education Statistics, using National Science Foundation field definitions.

TABLE 2-19

SCIENCE AND ENGINEERING BACHELOR'S DEGREES, 1965-1982

Year	ALL BACHELOR'S DEGREES					
	Total S/E	Physical Sciences[1]	Engineering	Math Sciences[2]	Life Sciences	Social Sciences[3]
1965	164,936	17,916	36,795	19,668	34,842	55,715
1966	173,471	17,186	35,815	20,182	36,864	63,424
1967	187,849	17,794	36,188	21,530	39,408	72,929
1968	212,173	19,442	37,614	24,084	43,260	87,774
1969	244,519	21,591	41,553	28,263	48,713	104,399
1970	264,122	21,551	44,772	29,109	52,129	116,561
1971	271,176	21,549	45,387	27,306	51,461	125,473
1972	281,228	20,887	46,003	27,350	53,484	133,604
1973	295,391	20,809	46,989	27,528	49,486	140,579
1974	305,062	21,287	43,530	26,570	68,226	145,449
1975	294,920	20,896	40,065	23,385	72,710	137,864
1976	292,174	21,559	39,114	21,749	77,301	132,451
1977	288,543	22,628	41,581	20,729	78,472	125,143
1978	288,167	23,175	47,411	19,925	77,138	120,518
1979	288,625	23,363	53,720	20,670	75,085	115,787
1980	291,983	23,661	59,340	22,686	71,617	114,779
1981	294,867	24,175	64,068	26,406	68,086	112,132
1982	306,422	24,052	67,021	31,866	63,884	119,599
	DEGREES AWARDED TO WOMEN					
1965	36,213	2,532	139	6,453	8,277	18,812
1966	39,482	2,333	146	6,702	8,464	21,837
1967	44,002	2,402	184	7,334	8,948	25,134
1968	53,463	2,674	211	8,841	10,091	31,646
1969	63,196	2,952	313	10,348	11,308	38,275
1970	68,878	2,969	338	10,516	11,875	43,180
1971	72,996	3,014	3656	9,818	11,803	47,996
1972	77,671	3,148	501	9,784	12,694	51,544
1973	83,839	3,121	580	9,985	14,570	55,583
1974	91,793	3,536	706	9,719	17,836	59,996
1975	93,342	3,838	860	8,656	29,811	59,177
1976	95,597	4,139	1,443	7,678	23,789	58,584
1977	97,453	4,551	2,086	7,488	25,609	57,719
1978	100,060	4,987	3,497	7,110	26,954	57,512
1979	102,292	5,287	4,919	7,421	27,548	57,117
1980	105,974	5,651	6,014	8,247	27,596	58,466
1981	108,442	5,980	7,117	9,734	27,476	58,135
1982	111,455	6,186	8,231	12,055	36,383	58,719

[1] Includes Environmental Science
[2] Includes Computer Science
[3] Includes Psychology

SOURCE: Projections of Education Statistics to 1988-89 National Center for Education Statistics, 1980

TABLE 2-20

PROJECTIONS OF SCIENCE AND ENGINEERING BACHELOR'S DEGREES, BY FIELD, SEX AND YEAR, 1981-1989

YEAR	All Bachelor's Degrees					
	Total S/E	Physical Sciences[1]	Engineering	Math Sciences[2]	Life Sciences	Social Sciences[3]
1981	299,664	24,660	68,210	16,850	81,630	108,310
1982	307,382	25,410	76,060	17,070	83,910	104,930
1983	305,527	26,370	75,130	17,620	84,650	101,760
1984	299,768	26,190	73,400	17,750	84,630	97,800
1985	292,064	25,610	71,470	17,730	83,940	93,310
1986	287,714	25,310	69,330	17,820	83,900	90,750
1987	279,021	24,780	67,060	17,780	82,910	86,490
1988	275,094	24,590	65,490	18,040	82,940	84,030
1989	272,964	24,740	64,340	18,290	83,580	82,010
	Projections for Women					
1981	92,500	5,840	6,210	5,340	28,420	52,320
1982	102,070	6,360	7,610	5,490	29,820	52,790
1983	100,240	6,580	7,390	5,570	30,110	50,590
1984	97,950	6,740	7,130	5,620	30,300	48,160
1985	94,880	6,620	6,810	5,830	30,170	45,450
1986	95,840	6,990	6,810	6,130	31,040	44,870
1987	93,260	6,980	6,530	6,270	30,960	42,520
1988	93,110	7,170	6,460	6,530	31,410	41,540
1989	93,530	7,560	6,420	6,670	32,190	40,690

TABLE 2-21

PROJECTIONS OF SCIENCE AND ENGINEERING DOCTORAL DEGREES, BY FIELD, SEX AND YEAR, 1981-1989

YEAR	All Doctoral Degrees					
	Total S/E	Physical Sciences[1]	Engineering	Math Sciences[2]	Life Sciences	Social Sciences[3]
1981	17,320	2,960	2,300	890	4,610	6,560
1982	17,100	2,850	2,330	830	4,600	6,490
1983	16,530	2,780	2,270	810	4,460	6,210
1984	16,110	2,730	2,230	800	4,350	6,000
1985	15,710	2,660	2,170	780	4,220	5,880
1986	15,390	2,610	2,130	770	4,120	5,760
1987	15,080	2,560	2,090	750	4,020	5,660
1988	14,810	2,570	2,050	730	3,920	5,540
1989	14,400	2,450	2,000	710	3,820	5,420
	Projections for Women					
1981	3,450	320	50	140	950	1,990
1982	3,350	310	50	140	920	1,930
1983	3,250	300	50	130	900	1,870
1984	3,210	300	50	130	890	1,840
1985	3,160	290	50	130	870	1,820
1986	3,110	290	50	130	860	1,780
1987	3,060	280	50	120	850	1,760
1988	3,020	280	50	120	840	1,730
1989	2,960	280	50	110	830	1,690

1 Includes Environmental Sciences
2 Includes Computer Specialties
3 Includes Psychology

CHAPTER 3

GENERAL PROFESSIONS

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FIELD: Professional Fields

SOURCE: Summary Table derived from information throughout Professional Women and Minorities

TABLE 3-1

APPROXIMATE PERCENTAGES OF WOMEN AND MINORITIES ENROLLED, GRADUATING AND WORKING IN THE PROFESSIONS

PROFESSION	WOMEN					MINORITIES				
	ENROLLMENTS		LATEST DEGREES		Labor Force Total	ENROLLMENTS		LATEST DEGREES		Labor Force Total
	1st Year	Total	Bachelor's/ 1st Prof.	Advan.		1st Year	Total	Bachelor's/ 1st Prof.	Advan.	
Accountants			42.4	33.1	38.5			9.0	7.6	12.2
Business Managers	43.7[1]	30.0[2]	39.3	27.6	32.4	17.7[1]	9.6[2]	11.0	9.7	9.7
Architects	28.4[1]	28.4	29.8	25.4	12.7	12.9[1]	12.2	9.4	9.7	
Engineers	15.8	14.5	13.2	8.6	5.8	14.1	12.0	8.8	6.7	
Lawyers	38.4	36.8	50.8	20.1	15.3	10.5	9.1	7.0	2.0	5.5
Journalists			61.5	50.6	48.4			11.0	9.7	5.7
Physicians	31.6	29.3	26.7		15.8	16.1	15.0	11.7		17.4
Dentists	24.4	22.1	20.6		3.8	16.8	14.3	10.0		7.5
Optometrists	26.7	25.7	22.0		8.3		10.9	6.1		5.3
Osteopaths	25.4	22.6	19.8		10.6	7.6	6.1	4.4		9.0
Podiatrists	20.7	18.6	10.5		8.4		12.0	6.9		5.6
Veterinarians	48.6	47.1	46.4		14.0	6.0	5.2	3.8		4.1
Pharmacists	53.9	52.6	49.4	40.7	26.7		22.0	11.2	17.0	10.4
Clerics & Theologians			15.7	28.3	5.6			6.6	4.4	9.2
Librarians & Archivists			86.0	81.5	84.4			9.6	7.6	12.2

[1] Undergraduate [2] Graduate

FIELD: Professional Fields

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1983, National Research Council

TABLE 3-2

DOCTORATES AWARDED FROM 1920 TO 1983 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978-FY1981			FY1982			FY1983		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
PROFESSIONAL FIELDS, TOTAL	15,032	1,634	10.9	6,597	1,032	15.6	7,974	2,358	29.6	1,362	408	30.0	1,728	504	29.2
Business Administration, Subtotal [1]	6,399	170	2.7	3,766	163	4.3	5,596	1,492	26.7	686	113	16.5	755	124	16.4
Accounting [2]													163	31	19.0
Banking & Finance [2]													94	10	10.6
Business Admin. & Mgmt. [2]													180	25	13.9
Business Economics [2]													25	1	4.0
Marketing Mgmt. & Research [2]													73	17	23.3
Business Statistics [2]													8	0	0.0
Operations Research [2]													38	9	23.7
Organizational Behavior [2]													53	16	30.2
Business & Mgmt., General [2]													36	3	8.3
Business & Mgmt., Other [2]													85	12	14.1
Communications, Subtotal [2]													252	103	40.9
Communications, Research [2]													51	15	29.4
Journalism [3]	406	32	7.9	94	11	11.7	75	19	25.3	18	3	16.7	21	8	38.1
Radio & Television [2]													27	9	33.3
Communications, General [2]													60	30	50.0
Communications, Other [2]													93	41	44.1
Other Professional Fields, Subtotal													721	277	38.4
Architecture/Environ. Design [4]	57	4	7										34	5	14.7
Home Economics	690	653	94.7	278	245	88.1	344	294	85.5	98	84	85.7	79	69	87.3
Law	1,315	56	4.3	133	7	5.3	94	4	4.3	21	3	14.3	19	0	0.0
Library & Archival Science	428	140	32.7	312	127	40.7	250	126	50.4	83	51	61.4	51	30	58.8
Public Administration [2]													114	26	22.8
Social Work	886	314	35.4	683	333	48.8	714	342	47.9	217	120	55.3	184	109	59.2
Theology	4,761	260	5.5	1,069	82	7.7	806	67	8.3	205	24	11.7	223	32	32.0
Professional Fields, Other [5]	90	5	5.6	262	64	24.4	95	14	14.7	34	10	29.4	17	6	35.3

[1] Originally "Business & Commerce, Business Administration," Changed to "Business Administration" in 1962, and to "Business Administration and Management" in 1983.

[2] Broken out in 1983.

[3] Originally "Writing & Journalism." Changed to "Journalism" in 1962.

[4] Dropped in 1962. Added in 1983 as "Architecture and Environmental Design."

[5] Added in 1968.

SOURCE: Earned Degrees Conferred Series, National Center for Education Statistics, 1947-48--1981-82; Journal of American Medical Association, Vol. 238, No. 26, December 26, 1977; Vol. 243, No.9, March 1980; Vol. 246, No. 25, December 25, 1981; Vol. 248, No. 24, December 24/31, 1982, Copyright by the American Medical Association; A Review of Legal Education in the United States, Fall 1977, Fall 1979, and 1981-82, American Bar Association; and personal communication from the American Veterinary Medicine Association, American Dental Association, American Podiatry Association and the American Pharmaceutical Association.

TABLE 3-3

FIRST PROFESSIONAL DEGREES CONFERRED BY FIELD AND SEX, SELECTED YEARS 1947-48 THRU 1983-84

YEAR		MEDICINE		DENTISTRY		OPTOMETRY		OSTEOPATHY		PODIATRY		VET. MEDICINE		LAW		THEOLOGY		ARCHITECTURE		PHARMACY	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1947-48	T	6,714		1,625		1,425						242		10,990				1,074		2,104	
	W	744	11.1	37	2.3	40	2.8					13	5.4	420	3.8			131	12.2	449	21.3
1949-50	T	5,612		2,579		1,801		346				803		14,312		3,221		2,563		5,751	
	W	584	10.4	18	0.7	19	1.1	19	5.5			12	1.5	421	3.0	211	6.6	122	4.8	441	7.7
1953-54	T	6,757		3,102		706		499				803		9,298		4,463		1,623		3,885	
	W	343	9.1	39	0.8	20	2.8	10	2.2			10	1.2	322	3.5	119	2.7	92	5.7	343	8.8
1957-58	T	6,861		3,065		264		466				809		9,394		4,989		1,612		3,782	
	W	351	5.1	34	0.9	1	0.4	6	1.3			13	1.6	272	2.9	61	1.2	76	4.7	391	10.3
1959-60	T	7,074		3,247		339		423				825		9,240		5,184		1,801		3,492	
	W	394	5.9	26	0.8	4	1.2	8	1.9			18	2.2	230	2.5	87	1.6	57	3.3	416	13.5
1963-64	T	7,342		3,196		305		352				852		10,671		4,423		2,059		2,207	
	W	432	6.3	14	0.4	5	1.7	4	1.1			32	3.9	307	2.9	65	1.5	78	3.9	254	11.5
1965-66	T	7,720		3,264		380		360		136		922		13,246		4,124		2,589		3,763	
	W	516	7.2	35	1.1	3	0.8	5	1.4	2	1.5	52	6.0	470	3.5	74	1.8	183	4.6	536	16.6
1970-71	T	8,986		3,777		531		472		241		1,252		17,652		5,055		5,538		4,593	
	W	829	9.2	46	1.2	13	2.4	11	2.3	5	2.0	98	7.8	1,293	7.3	118	2.3	667	12.0	951	25.2
1972-73	T	10,398		5,086		771		523		259		1,299		27,484		5,291		6,980		5,079	
	W	939	9.0	58	1.4	20	2.6	15	2.9	1	0.4	133	10.2	2,224	8.1	182	3.4	923	13.2	1,277	25.1
1974-75	T	12,900		4,809		792		665		353		1,415		29,497		5,098		8,238		6,487	
	W	1,654	13.2	149	3.1	40	5.1	35	5.3	4	1.1	225	15.9	4,455	15.1	348	6.8	1,435	17.4	1,821	28.1
1976-77	T	13,599		5,138		953		852		486		1,586		34,104		5,861		9,222		7,495	
	W	2,611	19.2	374	7.3	105	11.0	75	8.8	16	3.3	362	22.8	7,657	22.5	554	9.5	1,973	21.4	2,434	32.5
1977-78	T	14,279		5,189		1,014		944		543		1,635		34,402		6,367		9,266		7,296	
	W	3,069	21.5	566	10.9	133	13.1	118	12.5	26	4.3	401	24.5	8,945	26.0	722	11.3	2,199	23.7	2,584	35.4
1978-79	T	14,925		5,488		1,046		1,065		572		1,714		35,387		6,607		9,297		6,919	
	W	3,452	23.1	652	11.9	136	13.0	167	15.7	41	7.2	496	28.9	10,084	28.5	866	13.1	2,401	25.8	2,759	39.9
1979-80	T	15,046		5,321		1,085		1,011		580		1,852		35,855		7,012		9,176		7,122	
	W	3,523	23.4	719	13.5	170	15.7	159	15.7	73	12.6	615	33.2	10,828	30.2	1,009	14.4	2,548	27.8	2,919	41.0
1980-81	T	15,505		5,460		1,097		1,145		597		1,922		36,331		6,898		9,455		6,640	
	W	3,833	24.7	788	14.4	207	18.9	188	16.4	69	11.6	677	35.2	11,768	32.1	962	13.9	2,645	28.1	2,910	43.8
1981-82	T	15,985		5,550		1,113		1,017		599		1,886		35,543		6,091		9,728		6,448	
	W	3,991	25.0	825	14.9	224	20.0	186	18.3	63	10.5	668	35.4	11,607	32.7	1,084	15.7	2,903	29.9	3,031	47.0
1982-83	T	15,728		5,371		1,120		1,317				2,012								5,919	
	W	4,193	26.7	838	15.6	246	22.0	261	19.8			822	40.9							2,925	49.4
1983-84	T			5,274																	
	W			1,089	20.6																

SOURCE: "Degrees Awarded to Women," National Center for Education Statistics; and Earned Degrees 1979 to 1982, NCES, unpublished

TABLE 3-4

PROPORTION OF FIRST PROFESSIONAL DEGREES AWARDED TO WOMEN BY FIELD, 1971-72 - 1981-82

FIELD	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
Chiropractic	* %	* %	* %	* %	9.3%	8.5%	10.0%	10.6%	12.1%	16.6%	17.9%
Dentistry	1.2	1.4	2.0	3.1	4.5	7.4	11.2	11.8	13.5	14.4	15.4
Law, General	7.2	8.1	11.5	15.1	19.2	22.5	26.0	28.5	30.2	32.1	33.4
Medicine	9.0	9.0	11.2	13.2	16.2	19.2	21.5	23.1	23.4	24.7	25.0
Optometry	2.2	2.6	4.2	5.0	7.7	11.0	13.1	13.0	15.7	18.9	19.9
Osteopathic Medicine	3.5	2.9	2.8	5.3	7.2	8.8	12.5	15.7	15.7	16.4	17.9
Pharmacy	*	*	*	*	29.6	27.5	30.2	36.0	37.5	43.8	41.7
Podiatry or Podiatric Medicine	0.3	0.3	1.1	1.1	2.6	3.3	4.8	7.2	12.6	11.6	10.5
Theological Professions, General	1.9	3.4	5.5	6.8	7.6	9.5	11.3	13.1	14.4	13.9	15.7
Veterinary Medicine	9.4	10.2	11.2	15.9	18.1	22.8	24.5	28.9	32.8	35.2	36.2
Other	20.8	11.8	26.1	11.0	10.0	47.8		13.1			
ALL FIELDS	6.3	7.1	9.9	12.5	15.6	18.7	21.5	23.6	24.9	26.6	27.5

* Data not available.

SOURCE: Data on Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity, and Sex, Academic Year 1980-1981, U.S. Department of Education, Office for Civil Rights, Unpublished

TABLE 3-5

FIRST PROFESSIONAL DEGREES BY RACIAL/ETHNIC GROUP, SEX AND FIELD, 1980-1981

FIELD	TOTAL*			BLACK NON-HISPANIC			HISPANIC			ASIAN/PACIFIC ISLANDER			AM. INDIAN/ ALASKAN NATIVE			WHITE NON-HISPANIC			NONRESIDENT ALIEN		
	Total	Women	% W	Total	Women	% B	Total	Women	% H	Total	Women	% A/P	Total	Women	% A.I.	Total	Women	% Wh	Total	Women	% Al
All Fields	71,340	19,146	26.8	2,931	1,159	4.1	1,541	410	2.2	1,456	465	2.0	192	58	0.3	64,551	16,922	90.5	669	132	19.7
Dentistry	5,460	788	14.4	195	69	3.6	86	17	1.6	204	45	3.7	10	1	0.2	4,896	788	89.7	69	17	1.3
Medicine	15,505	3,833	24.7	769	324	5.0	395	90	2.5	446	117	2.9	51	12	0.3	13,723	3,263	88.5	121	27	0.8
Optometry	1,097	207	18.9	9	6	0.8	16	3	1.5	40	19	3.6	2	1	0.2	1,017	174	92.7	13	4	1.2
Osteopathic Med.	1,145	188	16.4	16	5	1.4	13	2	1.1	14	6	1.2	8	1	0.7	1,091	173	95.3	3	1	0.3
Pharmacy	664	283	42.6	20	12	3.0	19	8	2.9	115	52	17.3	3	1	0.5	471	195	70.9	36	15	5.4
Podiatry	597	69	11.6	20	7	3.4	12	2	2.0	8	2	1.3	1	1	0.2	552	57	92.5	4	0	0.7
Veterinary Med.	1,922	677	35.2	37	21	1.9	11	4	0.6	17	6	0.9	4	2	0.2	1,846	642	96.0	7	2	0.4
Chiropractic Med.	2,337	389	16.6	13	2	0.6	24	3	1.0	22	1	0.9	3	2	0.1	2,144	357	91.7	131	24	5.6
Law	36,331	11,768	32.4	1,576	671	4.3	899	278	2.5	530	208	1.5	101	33	0.3	33,109	10,545	91.1	116	33	0.3
Theology	6,282	1,944	30.9	276	42	4.4	66	3	1.1	60	9	1.0	9	4	0.1	5,702	877	90.8	169	9	2.7

* Includes degree recipients whose racial/ethnic group was not reported (598 men and 18 women)

SOURCE: Digest of Education Statistics, NCES: Review of Legal Education in the United States, 1978, and Fall--1980-82, American Bar Association; Journal of the American Medical Association, Vol. 238, No. 26, December 26, 1977; Vol. 246 No. 25, December 25, 1981; Vol. 248, No. 24, December 24-31, 1982; and Vol. 250, No. 12, September 23, 1983; Annual Report, Dental Education Series, 1975-78, 1980-81, American Dental Association; Personal Communication with the American Association of Dental Schools, April 1983; Fall Enrollments Questionnaire 1974-77 and Annual Statistical Report, 1981, American Association of Colleges of Osteopathic Medicine; and Personal Communications from the Association of American Veterinary Medical Colleges; the American Association of Dental Schools and the American Association of Colleges of Osteopathic Medicine; Minorities and Women in the Health Fields, Health Resources Administration, 1980

TABLE 3-6

ENROLLMENT FOR FIRST PROFESSIONAL DEGREES BY FIELD AND SEX, SELECTED YEARS 1960 THRU 1984

YEAR		MEDICINE		DENISTRY		OPTOMETRY		OSTEOPATHY		PODIATRY		VET. MEDICINE		LAW		THEOLOGY		ARCHITECTURE*	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1960-61	T	30,288		13,580		1,101						3,832		43,695				15,908*	
	W	1,745	5.8	88	0.6	40	3.6					137	3.6	1,651	3.8			780*	4.9
1966-67	T	28,685		11,826		1,671		1,431		678		2,245		46,878		9,949		1,151	
	W	2,099	7.3	180	1.5	37	2.2	32	2.2	9	1.3	183	8.1	2,032	4.3	294	3.0	85	7.4
1968-69	T	35,733		15,542		2,241		1,878		1,108		4,488		64,220		12,369		1,424	
	W	3,129	8.8	171	1.1	53	2.4	54	2.9	8	0.7	351	7.8	3,745	5.8	328	2.7	166	11.7
1971-72	T	43,965		17,433		2,691		2,301		1,267		5,163		94,416		22,789		6,262	
	W	4,730	10.8	355	2.0	86	3.2	79	3.4	15	1.2	593	11.5	9,075	9.6	890	3.9	1,126	18.0
1973-74	T	49,511		19,215		3,360		2,799		1,633		5,528		103,641		21,030		8,577	
	W	7,701	15.6	892	4.6	227	6.8	180	6.5	40	2.4	957	17.3	16,730	16.1	1,543	7.3	1,886	22.0
1975-76	T	55,622		20,517		3,811		3,438		2,105		5,694		113,205		23,960		10,231	
	W	11,386	20.5	1,987	9.7	415	10.9	364	10.6	108	5.1	1,337	23.5	26,403	23.3	2,412	10.1	2,555	25.0
1976-77	T	58,266		21,013		4,033		3,671		2,204		6,571		117,451				7,884	
	W	13,059	22.4	2,349	11.1	542	13.4	472	12.9	157	7.1	1,805	27.5	29,538	29.2			2,198	27.9
1977-78	T	60,039		21,510		4,440		3,926		2,388		6,903		118,557				10,789	
	W	14,218	23.7	2,796	13.0	699	15.7	570	14.8	259	10.8	2,129	30.8	32,538	27.5			3,385	31.4
1978-79	T	62,213		22,179		4,436		4,254		2,498		7,312		119,120				9,273	
	W	15,102	24.3	3,112	14.0	757	17.1	688	16.2	268	10.7	2,471	33.8	36,251	30.4			2,397	25.8
1979-80	T	63,800		22,482		4,500		4,479		2,531		7,007		122,801				7,778	
	W	16,141	25.3	3,482	15.5	868	19.3	775	17.3	305	12.1	2,570	36.7	38,627	31.5			2,649	34.1
1980-81	T	65,497		22,842		4,540		4,940		2,577		8,154		125,397				9,479	
	W	17,204	26.3	3,879	17.0	985	21.7	971	19.7	306	11.9	3,220	29.4	42,122	33.6			3,220	34.0
1981-82	T	66,485		22,621		4,541		5,304		2,584		8,499		127,312					
	W	18,555	25.0	4,227	18.7	1,077	23.7	1,108	20.9	361	14.0	3,576	42.0	44,902	35.3				
1982-83	T	66,886		22,235		4,561		5,822		2,608		8,682		127,828					
	W	19,627	29.3	4,457	20.0	1,173	25.7	1,317	22.6	428	16.4	4,028	46.4	47,083	36.8				
1983-84	T	67,327		21,428						2,556		8,816							
	W	20,635	30.6	4,733	22.1					476	18.6	4,152	47.1						

*Includes Environmental Design after 1966.

SOURCE: National Center for Education Statistics, 1980 unpublished data; Journal of American Medical Association, Vol. 250, No. 12, Sept. 23, 1983, Copyright AMA; Personal communication, American Association of Dental Schools, 1984; Personal Communication, Association of American Veterinary Colleges, 1984; 1982 Review of Legal Education, Copyright ABA

TABLE 3-7

ENROLLMENTS FOR FIRST PROFESSIONAL DEGREES, BY SEX AND ETHNICITY, 1980 AND 1983-84

DEGREE	TOTAL		WHITE*		BLACK		ASIAN		AMERICAN INDIAN		HISPANIC		NON-RESIDENT ALIEN	
	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women
1980														
Medicine	74,313	19,122	63,810	15,619	3,983	1,717	2,636	769	240	71	3,069	832	555	114
Percent of Total	100.0	25.7	85.9	21.0	5.4	2.3	3.6	1.0	0.3	0.1	4.1	1.1	0.8	0.2
Percent of Women		25.7		24.5		43.1		30.2		29.6		27.1		20.5
Dentistry	26,813	3,936	19,642	3,017	1,001	382	971	231	144	17	770	220	285	69
Percent of Total	100.0	14.7	73.3	11.3	3.7	1.4	3.6	0.9	0.5	0.1	2.9	0.8	1.1	0.3
Percent of Women		14.7		15.4		38.2		23.8		11.8		28.6		24.2
Veterinary Medicine	8,013	3,141	7,658	4,682	168	92	73	40	18	8	84	24	21	10
Percent of Total	100.0	39.2	95.6	58.4	2.1	1.2	0.9	0.5	0.2	0.1	1.1	0.3	0.3	0.1
Percent of Women		39.2		61.1		54.8		45.0		44.4		28.6		47.6
Law **	101,675	34,638	90,940	30,250	4,784	2,255	1,451	597	610	228	3,219	1,142	671	166
Percent of Total	100.0	34.1	89.4	29.8	4.7	2.2	1.4	0.6	0.6	0.2	3.2	1.1	0.7	0.2
Percent of Women		34.1		33.3		47.1		41.1		37.4		35.5		24.7
1983-84														
Medicine	67,327	20,635	57,454	16,911	3,892	1,748	3,290	1,101	258	95	2,433	780		
Percent of Total	100.0	30.6	85.3	25.1	5.8	2.6	4.9	1.6	0.4	0.1	3.6	1.2		
Dentistry	21,428	4,733	18,404	3,736	1,000	405	1,357	421	64	14	603	157		
Percent of Total	100.0	22.1	85.9	20.3	4.7	40.5	6.3	31.0	0.3	21.9	2.8	26.0		
Veterinary Medicine	8,816	4,152	8,375	3,930	203	115	77	42	33	14	128	51		
Percent of Total	100.0	47.1	95.0	44.6	2.3	1.3	0.9	0.5	0.4	0.2	1.5	0.6		
Law	127,828	47,083	116,217		5,852		1,947		406		3,406			
Percent of Total	100.0	36.8	90.9		4.6		1.5		0.3		2.7			

* Non-Hispanic
** 1982-83

FIELD: Architecture and Environmental Design

SOURCE: Earned Degrees Conferred Series, 1970-71 thru 1981-82
U.S. Office of Education (NCES)

TABLE 3-8

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 - 1981-82

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	5,578	667	12.0	1,724	243	14.1	36	3	8.3
1971-72	6,452	775	12.0	1,928	281	14.6	50	7	14.0
1972-73	6,980	923	13.2	2,319	364	15.7	58	4	6.9
1973-74	7,840	1,164	14.8	2,733	502	18.4	69	4	5.8
1974-75	8,238	1,435	17.4	2,953	599	20.3	69	11	15.9
1975-76	9,169	1,757	19.2	3,215	670	20.8	82	13	15.8
1976-77	9,222	1,973	21.4	3,213	724	22.5	73	11	15.1
1977-78	9,266	2,199	23.7	3,121	812	26.0	73	16	21.9
1978-79	9,297	2,401	25.8	3,124	889	28.5	96	22	22.9
1979-80	9,176	2,548	27.8	3,157	900	28.5	79	13	16.5
1980-81	9,455	2,655	28.1	3,153	919	29.1	93	20	21.5
1981-82	9,728	2,903	29.8	3,327	1,085	32.6	80	22	27.5
TOTAL	100,401	21,400	21.3	33,967	7,988	23.5	858	146	17.0

FIELD: Architecture and Environmental Design

SOURCE: Personal Communication with American Institute of Architects, June, 1984

TABLE 3-9

AIA MEMBERSHIP BY RACE AND SEX, 1984

Estimated registered architects in U.S.		60,000
Members of AIA		40,941
Women		2,174
Minorities		1,838
Indian/Eskimo/Aleut	35	
Asian/Pacific Islander	945	
Hispanic	475	
Black	256	
Other	147	
Architecture firms in AIA		13,353
Headed by women	285	
Headed by minorities	575	

FIELD: Accounting

SOURCE: Minority Recruitment and Equal Opportunity Committee 1981 ,1982 and 1983 Report, by Sharon L. Donahue, American Institute of Certified Public Accountants

TABLE 3-10

NUMBER AND PERCENT OF PROFESSIONALS EMPLOYED IN MAJOR ACCOUNTING FIRMS BY MINORITY GROUP AND SEX, 1976 - 1983

	1976		1977		1978		1979		1980		1981		1982		1983	
MINORITY GROUP	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
American Indians	26	0.05	33	0.06	34	0.06	45	0.07	49	0.07	51	0.07	51	0.07	50	0.06
Asians	641	1.14	659	1.22	831	1.40	933	1.46	1,061	1.58	1,349	1.85	1,454	1.90	1,346	1.68
Blacks	955	1.70	1,032	1.91	1,042	1.76	1,130	1.77	1,204	1.80	1,193	1.63	1,185	1.55	1,132	1.42
Hispanics	541	0.96	537	0.99	620	1.04	646	1.01	662	1.00	788	1.08	905	1.18	1,037	1.30
Total Minority	2,163	3.84	2,261	4.18	2,527	4.26	2,754	4.30	2,976	4.44	3,381	4.63	3,595	4.69	3,565	4.46
Total Women	5,783	10.27	7,209	13.32	8,514	14.34	11,070	17.30	13,294	19.84	15,984	21.88	18,509	24.14	20,850	26.10
Total Professionals	56,336	100.00	54,122	100.00	59,352	100.00	64,020	100.00	67,005	100.00	73,046	100.00	76,670	100.00	79,896	100.00

TABLE 3-11

PLACEMENT OF ACCOUNTING GRADUATES FROM THE HISTORICALLY BLACK AND MINORITY COLLEGES AND UNIVERSITIES, 1973 - 1983

	1973		1974		1975		1976		1977		1978		1979		1980		1981		1983	
PLACEMENT	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Public Accounting	126	15.1	142	15.0	170	16.4	204	16.4	147	13.6	173	11.4	201	11.3	180	10.2	208	13.4	154	10.2
Industry	244	29.1	271	28.6	306	29.6	401	32.3	396	37.3	562	36.9	543	30.6	544	30.9	488	31.4	422	28.0
Government	136	16.3	160	16.9	158	15.3	172	13.9	163	15.4	199	13.1	297	16.7	252	14.3	217	14.0	167	11.1
Nonprofit Org.	19	2.3	22	2.3	26	2.5	21	1.7	32	3.0	38	2.5	60	3.4	64	3.6	38	2.4	48	3.2
Graduate Schools	51	6.1	65	6.9	94	9.1	112	9.0	111	10.5	131	8.6	139	7.8	118	6.7	120	7.7	116	7.7
Other	38	4.5	28	3.0	34	3.3	34	2.7	31	2.9	78	5.1	39	2.2	58	3.3	66	4.2	40	2.7
Unknown	223	26.6	259	27.3	246	23.8	298	24.0	181	17.1	341	22.4	496	27.9	545	30.9	418	26.9	559	37.1
Total Graduates	837	100.0	947	100.0	1,034	100.0	1,242	100.0	1,061	100.0	1,522	100.0	1,775	100.0	1,761	100.0	1,555	100.0	1,506	100.00
Total Majors	4,003		5,121		5,936		6,840		7,303		10,450		11,914		10,851		10,380		10,138	

TABLE 3-12

NUMBER OF CPA'S EMPLOYED IN MAJOR ACCOUNTING FIRMS BY MINORITY GROUP AND SEX, 1976 - 1983

MINORITY GROUP	1976	1977	1978	1979	1980	1981	1982	1983
American Indian	14	14	15	22	26	23	26	23
Asians	171	195	235	316	375	445	475	414
Blacks	114	129	139	172	194	212	240	258
Hispanics	149	162	201	240	240	278	305	360
Total Minority	448	500	590	750	835	958	1,046	1,055
Total Women	1,080	1,532	1,944	2,631	3,493	4,665	5,510	6,432

FIELD: Business Management

SOURCE: Earned Degrees Conferred Series, 1970-71 thru 1981-82
U.S. Office of Education (NCES)

TABLE 3-13

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 - 1981-82

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	116,709	10,803	9.3	26,654	1,045	3.9	810	23	2.8
1971-72	123,306	11,966	9.7	30,511	1,207	4.0	902	20	2.2
1972-73	128,244	13,840	10.8	31,239	1,533	4.9	932	53	5.7
1973-74	133,905	17,481	13.1	32,820	2,161	6.6	983	50	5.1
1974-75	135,455	22,223	16.4	36,450	3,080	8.4	1,011	41	4.0
1975-76	145,035	28,783	19.8	42,728	4,974	11.6	956	52	5.4
1976-77	152,088	35,583	23.4	46,545	6,664	14.3	869	55	6.3
1977-78	163,274	44,604	27.3	48,661	8,216	16.9	867	72	8.3
1978-79	175,420	53,875	30.7	50,646	9,698	19.1	863	101	11.7
1979-80	189,224	63,883	33.8	55,322	12,355	22.3	796	115	14.4
1980-81	200,876	73,806	36.7	58,018	14,513	25.0	845	125	14.8
1981-82	215,817	84,718	39.3	61,428	17,069	27.8	857	152	17.7
TOTAL	1,879,353	461,565	24.6	521,022	82,515	15.8	10,691	859	8.0

FIELD: Business and Management

SOURCE: STAT Sheet, 1984, American Assembly of Collegiate Schools of Business

TABLE 3-14

BUSINESS FACULTY MEMBERS AT AACSB MEMBER SCHOOLS BY SEX AND ETHNICITY, 1983-84

	Percent
Male	85.4
Female	14.6
White	88.7
Black	2.2
Hispanic	0.6
Asian	3.6
American Indian	0.2
Foreign	4.7
Female (New Hires)	23.3

FIELD: Law

SOURCE: Earned Degrees Conferred Series, 1970-71 thru 1981-82
U.S. Office of Education (NCES)

TABLE 3-15

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 - 1981-82

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	545	27	5.0	955	46	4.8	20	0	0.0
1971-72	503	33	6.6	932	54	5.8	40	1	2.5
1972-73	474	40	8.4	1,071	80	7.5	37	1	2.7
1973-74	494	52	10.5	1,181	84	7.1	27	1	3.7
1974-75	436	62	14.2	1,245	100	8.0	21	0	0.0
1975-76	531	100	18.8	1,442	173	11.9	76	3	3.9
1976-77	559	154	27.5	1,574	208	13.2	60	8	13.3
1977-78	653	187	28.6	1,786	261	14.6	39	5	12.8
1978-79	678	274	40.4	1,647	255	15.5	46	7	15.2
1979-80	683	311	45.5	1,817	286	15.7	40	4	10.0
1980-81	776	388	50.0	1,832	326	17.8	60	4	6.7
1981-82	846	430	50.8	1,892	383	20.2	22	2	10.0
TOTAL	7,178	2,058	28.7	17,375	2,256	13.0	488	36	7.4

Source: Hispanic Business, Apr. 1983, p. 29.

TABLE 3-16

FULL-TIME FACULTY IN ABA-APPROVED LAW SCHOOLS, 1980

	Total	Men	Women	% of Total	% of Women
TOTAL	**5,226**	**4,514**	**707**	**100.0**	**13.5**
Minority	293	241	52	5.6	17.7
American Indian	13	13	0	0.05	0.0
Asian American	32	30	2	0.6	6.2
Black	171	131	40	3.3	23.4
Mexican American	14	11	3	0.3	21.4
Puerto Rican	38	33	5	0.7	13.1
Other Hispanic	25	23	2	0.5	8.0
Non-Minority	4,933	4,273	655	94.4	13.3

SOURCE: A Review of Legal Education in the United States--Fall 1977-78 thru 1982-83; American Bar Association Section of Legal Education and Admission to the Bar, copyright by the American Bar Association

TABLE 3-17

NUMBER OF TEACHERS IN ABA APPROVED LAW SCHOOLS BY SEX, 1977-78, 1980-81 AND 1982-83

	1977 - 1978			1980 - 1981			1982-1983		
	TOTAL	WOMEN	% W	TOTAL	Women	% W	TOTAL	WOMEN	% W
Full-Time	3,875	411	10.61	4,225	517	12.24	4,476	661	14.77
Part-Time	2,156	230	10.67	2,255	205	9.09	2,514	306	12.17
Teaching Deans & Administrators	344	32	9.30	465	96	20.65	491	107	21.79
TOTAL	6,375	673	10.56	6,945	818	11.78	7,481	1,074	14.36

FIELD: Law

SOURCE: A Review of Legal Education in the United States - Fall 1977-78 through 1981-83, American Bar Association Section of Legal Education and Admission to the Bar, Copyright by ABA

TABLE 3-18

FIRST YEAR AND TOTAL ENROLLMENTS IN ABA APPROVED LAW SCHOOLS BY SEX AND ETHNICITY, 1969-70 - 1982-1983

YEAR	TOTAL	WOMEN		BLACK		HISPANIC*		ASIAN/PACIFIC ISLANDER		AM. INDIAN/ ALASKAN NATIVE	
	No.	No.	%	No.	%	No.	%	No.	%	No.	%
1969-70	29,128	*		1,115	3.83	309	1.06	*		44	0.15
	68,386	4,715	6.89	2,128	3.11	548	0.80			72	0.11
1970-71	34,713	*		*		*		*		*	
	82,499	7,031	8.52								
1971-72	36,171	*		1,716	4.74	526	1.45	254	0.70	71	0.20
	93,118	8,914	9.57	3,744	4.02	1,156	1.24	480	0.52	140	0.15
1972-73	35,131	*		1,907	5.43	649	1.85	298	0.85	79	0.22
	101,664	12,173	11.97	4,423	4.35	1,446	1.42	681	0.67	173	0.17
1973-74	37,108	*		1,943	5.25	729	1.97	327	0.88	109	0.29
	106,102	16,760	15.80	4,817	4.54	1,700	1.60	850	0.80	222	0.21
1974-75	38,074	*		1,910	5.02	874	2.30	429	1.13	110	0.29
	110,713	21,788	19.68	4,995	4.51	2,026	1.83	1,063	0.96	265	0.24
1975-76	39,038	*		2,045	5.24	818	2.10	436	1.12	118	0.30
	116,991	26,737	22.85	5,127	4.38	2,182	1.87	1,099	0.94	295	0.25
1976-77	39,996	*		2,128	5.32	953	2.38	484	1.21	133	0.33
	117,451	29,538	29.15	5,503	4.69	2,461	2.10	1,324	1.13	301	0.26
1977-78	39,676	11,928	30.06	1,945	4.90	983	2.48	510	1.28	137	0.35
	118,557	32,538	27.45	5,305	4.48	2,531	2.13	1,382	1.67	363	0.31
1978-79	40,479	*		2,021	5.00	1,078	2.66	557	1.38	145	0.36
	121,606	36,808	30.27	5,350	4.40	2,788	2.29	1,424	1.17	390	0.32
1979-80	40,717	*		2,002	4.92	1,075	2.64	577	1.42	171	0.42
	122,860	38,627	31.43	5,257	4.28	2,817	2.29	1,547	1.26	392	0.32
1980-81	42,296	*		2,144	5.07	1,176	2.78	641	1.52	163	0.39
	125,397	42,122	33.59	5,506	4.39	3,014	2.40	1,641	1.31	415	0.33
1981-82	42,521	15,811	37.18	2,238	5.26	1,266	2.98	650	1.52	160	0.38
	127,312	44,092	35.26	5,789	4.54	3,189	2.50	1,755	1.38	401	0.32
1982-83	42,034	16,136	38.39	2,217	5.27	1,319	3.14	731	1.74	154	0.37
	127,828	47,083	36.83	5,852	4.58	3,406	2.66	1,947	1.52	406	0.32

*Excludes University of Puerto Rico.

FIELD: Legal and Kindred

SOURCE: Federal Civilian Workforce Statistics, Affirmative Employment Statistics, U.S. Office of Personnel Management, CIG-82-71, September 30, 1982

TABLE 3-19

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN LEGAL AND KINDRED OCCUPATIONS BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 30, 1982

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		AM. INDIAN		ASIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% I	No.	% A	No.	% W
Law Clerk	281	127	45.2	62	22.1	28	10.0	44	15.7	8	2.8	1	0.4	9	3.2	219	77.9
General Attorney	16,664	4,130	24.8	1,739	10.4	600	3.6	1,173	7.0	377	2.3	35	0.2	154	0.9	14,925	89.6
Estate Tax Examiner	21	0	0.0	1	4.8	0	0.0	1	4.8	0	0.0	0	0.0	0	0.0	20	95.2
Hearings and Appeals	941	166	17.3	114	12.1	40	4.2	77	8.2	19	2.0	2	0.2	16	1.7	827	87.9
Administrative Law Judge	1,166	47	4.0	58	5.0	7	0.6	26	2.2	26	2.2	3	0.3	3	0.3	1,108	95.0
Deportation & Exclusion Exam.	4	1	25.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	100.0
Clerk of Court	7	6	85.7	2	28.6	2	28.6	1	14.3	0	0.0	1	14.3	0	0.0	5	71.4
Paralegal Specialist	2,635	1,586	60.6	583	22.1	433	16.4	459	17.4	78	3.0	19	0.7	27	1.0	2,052	77.9
Contract Representative	12,535	9,212	73.5	3,591	28.6	2,759	22.0	2,476	19.8	871	6.9	84	0.7	160	1.3	8,944	71.4
Patent Attorney	131	4	3.1	4	3.1	0	0.0	3	2.3	0	0.0	0	0.0	1	0.8	127	96.9
Patent Classifying	57	5	8.8	13	22.8	4	7.0	9	15.8	2	3.5	1	1.8	1	1.8	44	77.2
Patent Examing	1,052	93	8.8	161	15.3	39	3.7	106	10.1	9	0.9	1	0.1	45	4.3	891	84.7
Legal Instruments Exam. (Tech)	1,510	1,253	83.0	496	32.8	429	28.4	408	27.0	39	2.6	37	2.5	12	0.8	1,014	67.2
Legal Instr. Exam. (Clerical)	1,086	948	87.3	509	46.9	448	41.3	403	37.1	53	4.9	26	2.4	27	2.5	577	53.1
Land Law Examiner	303	234	77.2	10	3.3	9	3.0	3	1.0	3	1.0	3	1.0	1	0.3	293	96.7
Passport and Visa Examiner	505	203	40.2	79	15.6	37	7.3	55	10.9	18	3.6	0	0.0	6	1.2	426	84.4
Legal Clerk & Tech. (Tech)	2,046	1,815	88.7	563	27.5	492	24.0	438	21.4	84	4.1	11	0.5	30	1.5	1,483	72.5
Legal Clerk & Tech. (Cler)	4,542	4,251	93.6	1,343	29.6	1,223	26.9	971	21.4	267	5.9	45	1.0	60	1.3	3,199	70.4
Tax Law Specialist	641	128	20.0	54	8.4	27	4.2	45	7.0	4	0.6	0	0.0	5	0.8	587	91.6
General Claims Examiner	761	574	75.4	312	41.0	254	33.4	280	36.8	13	1.7	9	1.2	10	1.3	449	59.0
Workers Compensation Claims	574	258	44.9	131	22.8	81	14.1	107	18.6	11	1.9	2	0.3	11	1.9	443	77.2
Loss & Damage Claims	124	101	81.5	20	16.1	17	13.7	9	7.3	5	4.0	0	0.0	6	4.8	104	83.9
Social Ins. Claims Examiner	11,769	7,110	60.4	3,805	32.3	3,070	26.1	3,458	29.4	181	1.5	12	0.1	154	1.3	7,964	67.7
Unempl. Comp. Claims Exam.	101	81	80.2	50	49.5	42	41.6	49	48.5	1	1.0	0	0.0	0	0.0	51	50.5
Dependent & Estates Claims	67	50	74.6	25	37.3	16	23.9	19	28.4	3	4.5	0	0.0	3	4.5	42	62.7
Veterans Claims Examiner	2,776	907	32.7	455	16.4	266	9.6	342	12.3	69	2.5	8	0.3	36	1.3	2,321	83.6
Civil Serv. Ret. Claims Exam.	267	147	55.1	91	34.1	66	24.7	88	33.0	1	0.4	0	0.0	2	0.7	176	65.9
Claims Clerical	18,237	16,389	89.9	6,818	37.4	6,036	33.1	5,176	28.4	1,216	6.7	145	0.8	281	1.5	11,419	62.6

CHAPTER 4

GENERAL WORK FORCE

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SOURCE: 1980 Census of Population, Supplementary Report, May 1981, U.S. Department of Commerce

TABLE 4-1

POPULATION OF THE UNITED STATES BY AGE, SEX, RACE AND SPANISH ORIGIN, 1980

AGE	Total No.	% Female	PERCENT BY RACE AND SEX											
			White		Black		Native Am.		Asian		Other Race		HISPANIC*	
			% W	% F	% B	% F	% N.A.	% F	% A	% F	% O	% F	% H	% F
All Ages	226,504,825	51.4	83.2	51.3	11.7	52.8	0.6	50.6	1.6	51.6	3.0	54.4	6.5	50.2
Under 5	16,344,407	48.9	77.3	48.7	14.9	49.6	0.9	49.2	1.8	49.5	5.1	48.9	10.2	49.0
5 - 9	16,697,134	48.9	78.0	48.7	14.9	49.6	0.9	49.5	1.8	49.1	4.4	49.0	9.2	47.8
10 - 14	18,240,919	48.9	79.3	48.8	14.7	49.7	0.9	49.0	1.5	48.7	3.7	49.3	8.1	49.4
15 - 19	21,161,667	49.2	80.1	49.1	14.1	50.1	0.8	49.4	1.1	48.3	3.6	48.0	7.1	51.8
20 - 24	21,312,557	50.0	81.1	49.8	12.8	52.3	0.7	49.8	1.5	50.9	3.9	46.4	7.4	48.3
25 - 29	19,517,672	50.3	81.9	49.9	11.9	53.3	0.6	50.8	1.9	53.9	3.7	46.8	7.1	49.3
30 - 34	17,557,957	50.6	83.4	50.2	10.8	53.9	0.6	51.1	2.1	54.4	3.1	48.2	6.4	50.5
35 - 39	13,963,008	50.9	84.2	50.4	10.4	54.6	0.6	51.2	2.0	52.5	2.8	49.3	6.1	51.3
40 - 44	11,668,239	51.1	84.2	50.7	10.7	50.7	0.6	51.3	1.9	51.1	2.6	50.0	6.1	51.6
45 - 49	11,088,383	51.4	85.3	51.0	10.3	54.9	0.5	51.9	1.6	54.3	2.3	50.7	5.6	51.7
50 - 54	11,708,984	52.0	86.7	51.6	9.6	55.3	0.4	51.6	1.4	55.8	1.8	51.8	4.8	52.1
55 - 59	11,614,054	52.8	88.1	52.6	8.9	55.0	0.4	52.1	1.1	53.0	1.4	51.4	3.9	52.2
60 - 64	10,085,711	53.7	89.0	53.5	8.6	55.8	0.3	52.9	1.0	53.9	1.0	53.7	3.2	54.1
65 - 69	8,780,844	55.6	89.0	55.4	8.8	57.3	0.3	54.8	0.9	50.9	1.0	55.9	3.0	56.2
70 - 74	6,796,762	58.0	89.7	58.1	8.3	58.4	0.3	55.7	0.9	46.6	0.9	55.7	2.9	56.1
75 - 79	4,792,597	59.4	89.9	61.7	8.1	60.6	0.3	55.7	0.8	49.8	0.9	56.4	2.9	56.8
80 - 84	2,934,229	65.3	91.5	65.6	6.8	62.5	0.2	59.4	0.7	57.3	0.7	57.8	1.9	58.8
85 & Over	2,239,721	69.6	91.3	70.0	7.1	66.7	0.3	60.8	0.6	62.4	0.7	59.6	2.2	62.0
Median Age	30.0	31.3	31.3	32.6	24.9	26.2	23.0	23.5	28.6	29.3	22.3	22.4	23.2	23.3

* Persons of Hispanic Origin may be of any race.

SOURCE: 1981-82 Fact Book for Academic Administrators, American Council on Education

TABLE 4-2

18-YEAR OLDS BY SEX AND RACE, SELECTED YEARS, 1950-2000

Year	Population, Age 18[a] (in thousands)								
	All Races			Black & Other Races			Black		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
1950	2,164	1,090	1,074	271	133	138	b	b	b
1960	2,613	1,323	1,289	312	155	157	288	143	145
1970	3,780	1,913	1,867	512	253	258	462	228	234
1975	4,243	2,146	2,096	629	314	315	559	278	281
1976	4,251	2,150	2,101	632	316	316	559	279	281
1977	4,241	2,142	2,099	649	324	325	573	285	288
1978	4,228	2,138	2,090	652	325	326	573	285	288
1979	4,291	2,172	2,119	666	334	333	583	291	292
	Series II Projections[c]								
1980	4,211	2,130	2,081	666	334	332	581	290	291
1981	4,185	2,098	2,048	667	335	332	580	290	290
1982	4,087	2,070	2,017	668	336	332	579	290	289
1983	3,917	1,979	1,938	661	331	329	569	284	285
1984	3,703	1,874	1,829	644	323	321	548	274	274
1985	3,604	1,822	1,782	621	311	310	525	262	263
1986	3,521	1,783	1,738	616	308	307	519	259	259
1987	3,567	1,805	1,762	631	316	315	530	265	265
1988	3,653	1,850	1,804	646	324	322	539	270	269
1989	3,733	1,895	1,838	683	344	338	566	285	281
1990	3,426	1,736	1,690	654	329	324	533	268	265
1991	3,240	1,643	1,598	636	321	315	514	258	255
1992	3,168	1,609	1,559	621	314	307	496	250	246
1993	3,247	1,648	1,599	633	320	313	506	255	252
1994	3,199	1,626	1,573	620	314	306	495	250	246
1995	3,262	1,657	1,604	623	315	308	489	247	242
1996	3,359	1,707	1,652	639	323	315	499	252	247
1997	3,491	1,774	1,717	660	334	326	517	261	256
1998	3,652	1,856	1,796	681	345	336	533	269	264
1999	3,806	1,934	1,872	701	355	346	548	277	271
2000	3,911	1,987	1,923	717	363	354	560	283	277

a Total population, including armed forces overseas as of July 1

b Source does not estimate population for "Negro" or "Black," only for "Nonwhite."

c Series II projections use a fertility assumption of 2.1 lifetime births per woman. It should be remembered that this affects only the last years of the century for this age cohort. Projections do not reflect results of the 1980 Census

TABLE 4-3

TOTAL LABOR FORCE BY AGE GROUP, SEX, AND RACE, SELECTED YEARS, 1960-1990

Age Group, Sex, and Race	Annual Average Labor Force[a] (in thousands)					
	1960	1970	1975	1978	1985[b]	1990[b]
	All Races					
Total U.S.	72,104	85,903	94,798	102,537	115,043	121,456
16-24	12,720	19,916	23,488	25,602	25,554	23,536
25-54	46,596	51,487	57,142	62,337	75,190	84,492
55 and over	12,788	14,500	14,168	14,600	14,299	13,428
Men, total	48,933	54,343	57,712	60,535	64,951	67,059
16-24	8,101	11,773	13,313	14,194	13,514	12,205
25-54	31,962	33,279	35,507	37,330	42,718	46,739
55 and over	8,870	9,291	8,892	9,011	8,719	8,115
Women, total	23,171	31,560	37,086	42,002	50,092	54,397
16-24	4,619	8,143	10,175	11,408	12,040	11,331
25-54	14,634	18,208	21,635	25,007	32,472	37,753
55 and over	3,918	5,209	5,276	5,589	5,580	5,313
	Black and Other					
Total	7,894	9,526	10,691	12,372	14,440	15,976
16-24	1,481	2,361	2,908	3,207	3,255	3,172
25-54	5,263	5,845	6,402	7,730	9,710	11,288
55 and over	1,150	1,320	1,381	1,436	1,475	1,516
Men, total	4,814	5,507	6,358	6,667	7,589	8,263
16-24	930	1,378	1,682	1,740	1,738	1,664
25-54	3,149	3,332	3,853	4,098	5,012	5,743
55 and over	735	797	823	830	839	856
Women, total	3,080	4,019	4,333	5,705	6,851	7,713
16-24	551	983	1,226	1,467	1,517	1,508
25-54	2,114	2,513	2,549	3,632	4,698	5,545
55 and over	415	523	558	606	636	660

a Total labor force. This figure is about 2 million greater than the civilian labor force. The difference is found principally among men in the 16-44 age groups.

b Intermediate growth level projections

TABLE 4-4

EMPLOYED CIVILIANS 25 TO 64 YEARS OLD BY YEARS OF SCHOOL COMPLETED, RACE, HISPANIC ORIGIN, AND OCCUPATION, MARCH 1983 — Percent Distribution

Years of school completed, race, and Hispanic origin	Employed		Executive, administrative and managerial	Professional specialty	Technical, sales, and administrative support	Service occupations	Precision production, craft, and repair	Operators, fabricators, and laborers	Farming, forestry, and fishing
	Number (in thousands)	Percent							
Total	76,097	100.00	12.6	15.1	30.2	11.3	12.7	15.3	3.0
Less than 4 years of high school									
Total	12,505	100.0	4.1	1.2	13.4	20.6	19.1	34.9	6.6
White	10,179	100.0	4.6	1.3	14.4	17.6	21.2	34.3	6.6
Black	2,023	100.0	1.4	.9	9.4	33.7	8.9	38.6	7.2
Hispanic origin	1,639	100.0	2.2	.9	9.9	23.2	16.5	38.7	8.5
High School 4 years only									
Total	30,051	100.0	8.7	3.1	38.9	13.1	16.4	19.8	3.0
White	26,894	100.0	9.1	3.1	38.1	11.9	17.0	17.7	3.2
Black	2,805	100.0	4.7	3.0	27.5	24.2	10.8	28.8	1.1
Hispanic origin	1,208	100.0	7.5	1.8	34.7	15.1	15.1	23.9	2.2
College: 1 to 3 years									
Total	14,047	100.0	14.3	11.4	41.3	9.7	12.2	9.0	2.1
White	12,446	100.0	15.0	11.8	41.4	9.0	12.3	8.2	2.2
Black	1,287	100.0	8.9	8.5	41.7	14.9	10.1	15.3	.6
Hispanic origin	523	100.0	13.0	7.8	42.6	9.4	12.2	14.3	.4
College: 4 years or more									
Total	19,492	100.0	22.8	45.0	22.7	3.5	3.1	1.8	1.1
White	17,599	100.0	23.3	45.2	22.2	3.3	3.1	1.6	1.2
Black	1,035	100.0	18.7	45.6	21.9	6.1	3.1	4.4	1
Hispanic origin	407	100.0	21.4	42.0	19.2	9.1	4.9	2.5	1.2

TABLE 4-5

LABOR FORCE STATUS OF PERSONS 25 TO 64 YEARS OLD BY YEARS OF SCHOOL COMPLETED, SEX, RACE, AND HISPANIC ORIGIN, MARCH 1970 AND 1983 — Numbers in Thousands

Labor force status and years of school completed	Total		Men		Women		White		Black		Hispanic origin	
	1970	1983	1970	1983	1970	1983	1970	1983	1970[1]	1983	1970[2]	1983
Civilian noninstitutional population	87,983	111,658	42,049	53,862	45,934	57,794	78,576	96,864	9,335	11,739	3,542	6,258
Less than 4 years of high school	34,092	24,633	16,520	11,945	17,572	12,688	28,454	19,677	5,564	4,323	2,328	3,219
High school: 4 years only	33,470	44,815	14,077	19,224	19,393	25,590	31,001	39,516	2,471	4,430	802	1,799
College: 1 to 3 years	9,844	18,996	5,025	9,229	4,819	9,768	9,182	16,755	662	1,756	243	721
4 years or more	10,577	23,213	6,427	13,463	4,150	9,749	9,939	20,914	639	1,230	169	519
Civilian labor force	61,760	83,615	39,302	47,903	22,458	35,712	55,043	72,750	6,724	8,592	2,320	4,378
Less than 4 years of high school	22,288	14,857	14,757	9,303	7,531	5,556	18,537	11,978	3,735	2,525	1,415	1,989
High school: 4 years only	23,508	33,397	13,557	17,404	9,951	15,993	21,613	29,301	1,895	3,459	572	1,378
College: 1 to 3 years	7,261	15,159	4,811	8,459	2,450	6,702	6,728	13,304	535	1,483	191	578
4 years or more	8,703	20,201	6,177	12,738	2,526	7,462	8,145	18,171	559	1,127	142	434
Labor force participation rate	70.2	74.9	93.5	88.9	48.9	61.8	70.0	75.1	72.0	73.2	65.5	70.0
Less than 4 years of high school	65.4	60.3	89.3	77.9	42.9	43.8	65.1	60.9	67.1	58.4	60.8	61.7
High school: 4 years only	70.2	74.5	96.3	90.5	51.3	62.5	69.7	74.1	76.7	78.1	71.3	76.6
College: 1 to 3 years	73.8	79.8	95.6	91.7	50.8	68.6	73.3	79.4	80.8	84.5	78.6	80.2
4 years or more	82.3	87.0	96.3	94.6	60.9	76.5	81.9	86.9	87.5	91.6	84.0	83.6
Unemployed	2,024	7,518	1,121	4,710	904	2,810	1,707	5,835	317	1,440	116	602
Less than 4 years of high school	1,024	2,351	596	150	428	850	830	1,797	196	501	85	350
High school: 4 years only	684	3,347	330	2,089	354	1,277	585	2,806	99	653	22	170
College: 1 to 3 years	206	1,112	129	708	77	405	189	861	18	197	6	55
4 years or more	110	708	65	431	45	277	104	570	5	91	3	27
Unemployment rate	3.3	9.0	2.8	9.8	4.0	7.9	3.1	8.0	4.7	16.8	5.0	13.8
Less than 4 years of high school	4.6	15.8	4.0	16.1	5.7	15.3	4.5	15.0	5.2	19.8	6.0	17.6
High school: 4 years only	2.9	10.0	2.4	11.9	3.6	8.0	2.7	8.9	5.2	18.9	3.8	12.3
College: 1 to 3 years	2.8	7.3	2.7	8.4	3.1	6.0	2.8	6.5	3.4	13.3	3.1	9.5
4 years or more	1.3	3.5	1.1	3.4	1.8	3.7	1.3	3.1	.9	8.1	2.1	8.2

[1]Data refer to black and other workers.

[2]Data are derived from the 1970 census.

Note: Detail for the above race and Hispanic-origin groups for 1983 will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

TABLE 4-6

LABOR FORCE PARTICIPATION RATES OF PERSONS 25 TO 64 YEARS OLD BY YEARS OF SCHOOL COMPLETED, SEX, AND RACE, MARCH, 1983 — Percent

Years of school completed and sex	White	Black	Hispanic origin
MEN			
Total	89.8	81.7	90.4
Less than 4 years of high school	79.3	71.5	86.5
High school: 4 years only	91.0	86.5	93.7
College: 1 to 3 years	92.1	87.6	95.4
4 years or more	94.7	93.4	93.8
WOMEN			
Total	61.1	66.4	52.2
Less than 4 years of high school	42.9	47.3	41.8
High school: 4 years only	61.4	71.9	62.0
College: 1 to 3 years	67.2	81.9	64.6
4 years or more	75.6	90.1	72.7

TABLE 4-7

LABOR FORCE PARTICIPATION RATES BY SEX AND AGE, 1970 AND 1983

Age	Women		Men	
	1970	1983	1970	1983
25-64	61	77	96	95
25-34	58	82	95	95
35-44	58	76	99	98
45-54	67	73	97	96
55-64	64	56	90	83

SOURCE: Employment and Earnings, January 1984, p. 178-182, Bureau of Labor Statistics

TABLE 4-8

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX AND RACE, 1983

(Numbers in thousands)

Occupation	Total Employed	Percent of Total		
		Woman	Black	Hispanic Origin
Total, 16 years and over	100,834	43.7	9.3	5.3
Managerial & Professional	23,592	40.9	5.6	2.6
Executives, administrators, mgrs.	10,772	32.4	4.7	2.8
Officials ,adminis., publ. admin.	417	38.5	8.3	3.8
Administrators, protective services	54	14.0	2.8	1.0
Financial managers	357	38.6	3.5	3.1
Personnel, labor relation mgrs.	106	43.9	4.9	2.6
Purchasing managers	82	23.6	5.1	1.4
Mgrs., market., advertis., publ. rel.	396	21.8	2.7	1.7
Administrators, educ., rel. fields	415	41.4	11.3	2.4
Mgrs., medicine, health	91	57.0	5.0	2.0
Mgrs, properties, real estate	305	42.8	5.5	5.2
Management-related occupations	2,966	40.3	5.8	3.5
Accountants, auditors	1,105	38.7	5.5	3.3
Underwriters, financial officers	541	41.5	5.0	4.1
Management analysts	134	29.5	5.3	1.7
Personnel, training, labor rel. spec.	325	52.3	11.9	2.9
Buyers, wholesale, retail, exc. farm	191	47.2	2.5	5.8
Construction inspectors	53	7.0	2.9	4.2
Inspectors, compliance off., exc. constr.	150	23.1	11.4	4.1
Professional specialty	12,820	48.1	6.4	2.5
Architects	103	12.7	1.6	1.5
Engineers	1,572	5.8	2.7	2.2
Aerospace	80	6.9	1.5	2.1
Chemical	67	6.1	3.0	1.4
Civil	211	4.0	1.9	3.2
Electrical, electronic	450	6.1	3.4	3.1
Industrial	210	11.0	3.3	2.4
Mechanical	259	2.8	3.2	1.1
Mathematical, computer scientists	463	29.6	5.4	2.6
Computer systems analysts, scientists	276	27.8	6.2	2.7
Operations, sys. researchers, analysts	142	31.3	4.9	2.2
Natural scientists	357	20.5	2.6	2.1

Occupation	Total Employed	Percent of Total		
		Woman	Black	Hispanic Origin
Professional specialty continued				
Natural Scientists continued				
Chemists, exc. biochemists	98	23.3	4.3	1.2
Geologists, geodesists	65	18.0	1.1	2.6
Biological, life scientists	55	40.8	2.4	1.8
Health diagnosing occupations	735	13.3	2.7	3.3
Physicians	519	15.8	3.2	4.5
Dentists	126	6.7	2.4	1.0
Health assessment, treating occup.	1,900	85.8	7.1	2.2
Registered nurses	1,372	95.8	6.7	1.8
Pharmacists	158	26.7	3.8	2.6
Dietitians	71	90.8	21.0	3.7
Therapists	247	76.3	7.6	2.7
Inhalation	69	69.4	6.5	3.7
Physical	55	77.0	9.7	1.5
Speech	51	90.5	1.5	*
Physicians assistants	51	36.3	7.7	4.4
Teachers, college, university	606	36.3	4.4	1.8
Teachers, exc. college, univ.	3,365	70.9	9.1	2.7
Prekindergarten, kindergarten	299	98.2	11.8	3.4
Elementary school	1,350	83.3	11.1	3.1
Secondary school	1,209	51.8	7.2	2.3
Special education	81	82.2	10.2	2.3
Teachers, n.e.c.	425	64.5	5.7	2.0
Counselors, educational, vocational	184	53.1	13.9	3.2
Librarians, archivists, curators	213	84.4	7.8	1.6
Librarians	193	87.3	7.9	1.8
Social scientists, urban planners	261	46.8	7.1	2.1
Economists	98	37.9	6.3	2.7
Psychologists	135	57.1	8.6	1.1
Social, recreation, religious workers	831	43.1	12.1	3.8
Social workers	407	64.3	18.2	6.3
Recreation workers	65	71.9	15.7	2.0
Clergy	293	5.6	4.9	1.4
Religious workers, n.e.c.	66	50.9	2.5	0.4

SOURCE: Employment and Earnings, January 1984, p. 178-182, Bureau of Labor Statistics

TABLE 4-8 (continued)

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX AND RACE, 1983

(Numbers in thousands)

Occupation	Total Employed	Percent of Total			Occupation	Total Employed	Percent of Total		
		Women	Black	Hispanic Origin			Women	Black	Hispanic Origin
Professional specialty continued					**Sales occupations continued**				
Lawyers and judges	651	15.8	2.7	1.0	Sales reps, finance, business services	1,853	37.2	2.7	2.2
Lawyers	612	15.3	2.6	0.9	Insurance sales	551	25.1	3.8	2.5
Writers, artists, entertainers, athletes	1,544	42.7	4.8	2.9	Real estate sales	570	48.4	1.3	1.5
Authors	62	46.7	2.1	0.9	Securities, financial sales	212	23.6	3.1	1.1
Designers	393	52.7	3.1	2.7	Advertising, related sales	124	47.9	4.5	3.3
Musicians, composers	155	28.0	7.9	4.4	Sales occupations, other business serv.	396	41.0	2.4	2.9
Painters, sculptors, craft-artists, artist printmakers	186	47.4	2.1	2.3	Sales reps, commodities, exc. retail	1,442	15.1	2.1	2.2
Photographers	113	20.7	4.0	3.4	Sales workers, retail, personal serv.	5,511	69.7	6.7	4.8
Editors, reporters	204	48.4	2.9	2.1	Sales workers, motor vehicles, boats	230	6.4	3.2	3.0
Public relations specialists	157	50.1	6.2	1.9	Sales workers, apparel	451	83.2	8.1	6.0
Athletes	58	17.6	9.4	1.7	Sales workers, shoes	117	65.4	5.0	7.3
					Sales workers, furniture, home furn.	140	49.8	2.7	4.8
Technical, sales & admin. support	**31,265**	**64.6**	**7.6**	**4.3**	Sales workers, radio, tv, hi-fi, appl.	124	30.4	5.0	6.2
Technicians, related support	3,053	48.2	8.2	3.1	Sales workers, hardware, bldg. suppl.	189	22.7	2.5	3.6
Health technologists, technicians	1,111	84.3	12.7	3.1	Sales workers, parts	149	10.9	1.8	6.2
Clinical lab technol., technicians	255	76.2	10.5	2.9	Sales workers, other commodities	1,441	74.1	4.5	4.0
Dental hygienists	66	98.6	1.6	*	Sales counter clerks	140	70.1	7.8	4.3
Radiologic technicians	101	71.7	8.6	4.5	Cashiers	2,009	84.4	10.1	5.4
Licensed practical nurse	443	97.0	17.7	3.1	Street & door-to-door sales workers	378	81.0	4.4	3.4
Engr., related technol., technicians	822	18.4	6.1	3.5	News vendors	143	27.4	5.8	2.9
Electrical, Electronic technicians	260	12.5	8.2	4.6	Sales related occupations	54	58.7	2.8	1.3
Drafting occupations	273	17.5	5.5	2.3					
Science technicians	202	29.1	6.6	2.8	**Administrative support, incl. clerical**	**16,395**	**79.9**	**9.6**	**5.0**
Biological technicians	52	37.7	2.9	2.0	Supervisors	676	53.4	9.3	5.0
Chemical technicians	82	26.9	9.5	3.5	General office	382	65.7	10.5	4.9
Technicians, exc. health, engr., sci.	917	35.3	5.0	2.7	Financial records processing	93	62.2	5.8	5.1
Airplane pilots & navigators	69	2.1	*	1.6	Supervisors, distr., schedul., adj. clerks	156	22.7	8.9	5.3
Computer programmers	443	32.5	4.4	2.1	Computer equipment operators	605	63.9	12.5	6.0
Legal assistants	128	74.0	4.3	3.6	Computer operators	597	63.7	12.1	6.0
					Secretaries, stenog., typists	4,861	98.2	7.3	4.5
Sales occupations	**11,818**	**47.5**	**4.7**	**3.7**	Secretaries	3,891	99.0	5.8	4.0
Supervisors, proprietors	2,958	28.4	3.6	3.4	Stenographers	65	86.7	6.4	2.0
					Typists	906	95.6	13.8	6.4

SOURCE: Employment and Earnings, January 1984, p. 178-182, Bureau of Labor Statistics

TABLE 4-8 (continued)

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX AND RACE, 1983

(Numbers in thousands)

Occupation	Total Employed	Percent of Total			Occupation	Total Employed	Percent of Total		
		Woman	Black	Hispanic Origin			Woman	Black	Hispanic Origin
Administrative support continued					**Administrative support continued**				
Information clerks	1,174	88.9	8.5	5.5	**Adjusters, investigators continued**				
Interviewers	184	88.0	9.7	4.6	Insur. adjust., examin., investig.	199	65.0	11.5	3.3
Hotel clerks	64	68.6	6.7	3.2	Investig. & adjusters, exc. insur.	301	70.1	11.3	4.8
Transportation ticket, reserv. agents	98	64.7	10.3	5.7	Eligibility clerks, social welfare	69	88.7	12.9	9.4
Receptionists	602	96.8	7.5	6.6	Bill & account collectors	106	66.4	8.5	6.5
Records processing occup. exc. financial	866	82.4	13.9	4.8	Miscellaneous adminis. support	2,397	85.2	12.5	5.9
Order clerks	188	78.1	10.6	4.4	General office clerks	648	80.6	12.7	5.2
Personnel clerks, exc. payroll, timekeep.	64	91.1	14.9	4.6	Bank tellers	480	91.0	7.5	4.3
Library clerks	147	81.9	15.4	2.5	Data entry keyers	311	93.6	18.6	5.6
File clerks	287	83.5	16.7	6.1	Statistical clerks	96	75.7	7.5	3.4
Records clerks	157	82.8	11.6	5.6	Teachers' aides	348	93.7	17.8	12.6
Financial records processing	2,457	89.4	4.6	3.7					
Bookkeepers, accounting, audit. clerks	1,970	91.0	4.3	3.3	**Service occupations**	**13,857**	**60.1**	**16.6**	**6.8**
Payroll, timekeeping clerks	192	82.2	5.9	5.0	Private household	980	96.1	27.8	8.5
Billing clerks	146	88.4	6.2	3.9	Child care workers	408	96.9	7.9	3.6
Cost & rate clerks	96	75.6	5.9	5.3	Cleaners & servants	512	95.8	42.4	11.8
Billing, posting, calcul. mach. oper.	53	85.5	5.4	8.9	Protective service	1,672	12.8	13.6	4.6
Duplicating, mail, other mach. oper.	68	62.6	16.0	6.1	Supervisors, protec. serv.	127	4.7	7.7	3.1
Communications equipment operators	256	89.1	17.0	4.4	Super., police & detectives	58	4.2	9.3	1.2
Telephone operators	244	90.4	17.0	4.3	Firefighting & fire prevention	189	1.0	6.7	4.1
Mail & message distr. occupations	799	31.6	18.1	4.5	Firefighting occupations	170	1.0	7.3	3.8
Postal clerks, exc. mail carriers	248	36.7	26.2	5.2	Police & detectives	645	9.4	13.1	4.0
Mail carriers, postal service	259	17.1	12.5	2.7	Police, detect., public service	412	5.7	9.5	4.4
Mail clerks, exc. postal service	170	50.0	15.8	5.9	Sheriffs, bailiffs, other law enfor.	87	13.2	11.5	4.0
Messengers	122	26.2	16.7	5.2	Correctional instit. officers	146	17.8	24.0	2.8
Material record., sched., distr. clerks	1,562	37.5	10.9	6.6	Guards	711	20.6	17.0	5.6
Dispatchers	157	45.7	11.4	4.3	Guards, police exc. public serv.	602	13.0	18.9	6.2
Production coordinators	182	44.0	6.1	2.2					
Traffic, shipping, receiv. clerks	421	22.6	9.1	11.1	**Service occupations, exc. private household & protective service**	**11,205**	**64.0**	**16.0**	**6.9**
Stock & inventory clerks	532	38.7	13.3	5.5	Food preparation & service occupations	4,860	63.3	10.5	6.8
Weighers, measurers, checkers	79	47.2	16.9	5.8	Supervisors	239	63.5	10.6	5.0
Expediters	112	57.5	8.4	4.3	Bartenders	338	48.4	2.7	4.4
Adjusters & investigators	675	69.9	11.1	5.1					

SOURCE: Employment and Earnings, January 1984, p. 178-182, Bureau of Labor Statistics

TABLE 4-8 (continued)

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX AND RACE, 1983

(Numbers in thousands)

Occupation	Total Employed	Percent of Total		
		Women	Black	Hispanic Origin
Service occupations, exc. private household and protective service continued				
Waiters & waitresses	1,357	87.8	4.1	3.6
Cooks, exc. short order	1,359	50.8	16.0	6.8
Short-order cooks	93	38.5	12.9	2.4
Food counter, fountain, rel. occup.	326	76.0	9.1	6.7
Kitchen workers, food preparation	138	77.0	13.7	8.1
Waiters', waitresses' assistants	364	38.8	12.6	14.2
Miscellaneous food preparation	646	54.0	15.1	11.6
Health service occupations	1,739	89.2	23.5	4.8
Dental assistants	154	98.1	6.1	5.7
Health aides, exc. nursing	316	86.8	16.5	4.8
Nursing aides, orderlies, attendants	1,269	88.7	27.3	4.7
Cleaning & building service occupations	2,736	38.8	24.4	9.2
Supervisors	124	38.4	26.3	6.6
Maids, housemen	531	81.2	32.3	10.1
Janitors, cleaners	2,031	28.6	22.6	8.9
Personal service occupations	1,870	79.2	11.1	6.0
Barbers	92	12.9	8.4	12.1
Hairdressers, cosmetologists	622	88.7	7.0	5.7
Attendants, amusement, recreation facil.	131	40.2	7.1	4.3
Public transportation attendants	63	74.3	11.3	5.9
Welfare service aides	77	92.5	24.2	10.5
Child care workers	633	96.8	12.6	5.2
Precision production, craft & repair	**12,328**	**8.1**	**6.8**	**6.2**
Mechanics, repairers	4,158	3.0	6.8	5.3
Supervisors	252	7.0	3.7	3.3
Mechanics, repairers exc. supervisors	3,906	2.8	7.0	5.5
Vehicle, mobile equip. mech., repair.	1,683	0.8	6.9	6.0
Automobile mechanics	800	0.5	7.8	6.0
Bus, truck, stationary engine mech.	299	0.6	6.5	5.7
Aircraft engine mechanics	95	2.5	4.0	7.6
Small engine repairers	63	0.1	5.4	3.4

Occupation	Total Employed	Percent of Total		
		Women	Black	Hispanic Origin
Precision production continued				
Mechanics, repairers continued				
Automobile body, related repairers	199	0.7	6.5	6.8
Heavy equipment mechanics	162	0.7	5.4	4.9
Industrial machinery repairers	529	2.2	6.0	4.9
Electrical, electronic equip. repair.	674	7.4	7.3	4.5
Electronic rep., commun., indus. eq.	158	5.3	8.0	6.1
Data processing equipment repairers	98	9.3	6.1	4.5
Telephone line instal., repairers	59	5.6	5.8	4.6
Telephone installers, repairers	247	9.9	7.8	3.7
Heating, air condit., refrig. mechanics	200	0.5	6.0	5.3
Miscellaneous mechanics, repairers	792	4.0	7.5	5.4
Office machine repairers	66	3.3	9.3	3.9
Millwrights	94	1.0	6.4	2.4
Construction trades	**4,289**	**1.8**	**6.6**	**6.0**
Supervisors	504	1.3	3.2	4.6
Construction trades exc. supervisors	3,784	1.9	7.1	6.1
Brickmasons, stonemasons	156	0.3	12.2	9.2
Carpet installers	88	2.0	3.4	8.6
Carpenters	1,160	1.4	5.0	5.0
Drywall installers	95	1.4	3.8	8.6
Electricians	602	1.5	6.2	3.3
Elec. power installers, repairers	106	0.2	12.0	1.7
Painters, construc., maintenance	473	4.9	8.7	8.8
Plumbers, pipefitters, steamfitters	443	1.1	7.9	4.7
Concrete, terrazzo finishers	64	*	23.0	22.3
Insulation workers	56	4.8	5.8	11.3
Roofers	133	0.1	7.4	7.8
Structural metal workers	63	1.2	3.9	3.2
Extractive occupations	196	2.3	3.3	6.0
Supervisors	56	1.7	0.6	2.2
Drillers, oil wells	60	1.9	2.5	7.3

SOURCE: Employment and Earnings, January 1984, p. 178-182, Bureau of Labor Statistics

TABLE 4-8 (continued)

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX AND RACE, 1983

(Numbers in thousands)

Occupation	Total Employed	Percent of Total			Occupation	Total Employed	Percent of Total		
		Women	Black	Hispanic Origin			Women	Black	Hispanic Origin
Construction trades continued					**Operators, fabric., laborers continued**				
Precision production occupations	3,685	21.5	7.3	7.4	**Machine operators continued**				
Supervisors	1,210	14.1	6.6	5.7	Woodworking machine operators	145	11.9	11.2	7.9
Precision metalworking	892	5.5	6.2	6.3	Sawing machine operators	95	7.7	12.1	7.4
Tool & die makers	148	1.2	2.1	2.9	Printing machine operators, typesetters, compositers	459	25.6	7.0	4.7
Machinists	471	4.1	7.3	7.7	Printing machine operators	306	13.8	8.7	5.5
Sheet-metal workers	127	4.5	5.1	4.6	Typesetters & compositors	76	64.1	1.9	2.1
Precision woodworking	86	16.7	3.3	9.7	Textile, apparel, furnish. mach. oper.	1,414	82.1	18.7	12.5
Precision textile, apparel, furnishings machine workers	260	58.9	7.9	12.7	Winding, twisting mach. operators	97	75.2	38.2	2.5
Dressmakers	111	96.1	8.9	7.9	Textile sewing machine operators	806	94.0	15.5	14.5
Upholsterers	67	26.2	6.9	17.7	Shoe machine operators	77	72.5	12.4	7.7
Precision workers, assort. materials	452	56.9	7.5	10.4	Pressing machine operators	141	66.4	27.1	14.2
Optical goods workers	56	41.5	2.9	3.5	Laundering, dry clean. mach. oper.	164	64.7	21.0	12.9
Dental lab., medic. appl. tech.	50	41.1	5.5	7.3	Machine operators, assorted materials	2,517	32.8	15.3	9.9
Electrical, electronic equip. assemb.	246	74.2	10.8	13.2	Packaging, filling machine oper.	396	63.1	17.6	14.7
Precision food prod. occupations	408	25.5	11.1	9.6	Mixing, blending machine oper.	113	7.6	19.0	8.0
Butchers, meat cutters	276	15.6	13.5	9.2	Separat., filter., clarify. mach. oper.	62	5.4	12.0	2.7
Bakers	105	44.4	6.7	9.9	Painting, paint spraying mach. oper.	185	13.6	12.4	11.0
Precision inspectors, testers, rel. work.	130	25.6	8.8	6.3	Furnace, kiln, oven oper., exc. food	108	3.5	14.5	4.9
Inspectors, testers, graders	121	24.6	8.7	6.2	Slicing, cutting machine operators	195	23.3	15.9	14.9
Plant & systems operators	247	3.4	7.8	4.5	Photographic process mach. oper.	93	52.4	8.4	6.4
Power plant operators	52	4.7	8.3	5.6	Fabricators, assemblers, hand working occupations	1,715	33.7	11.3	8.7
Stationary engineers	119	2.1	7.8	4.1	Welders, cutters	543	5.0	8.3	8.6
Operators, fabricators, laborers	**16,091**	**26.6**	**14.0**	**8.3**	Assemblers	953	46.4	13.5	8.9
Machine operators, assemb., inspectors	7,744	42.1	14.0	9.4	Production inspectors, testers, samplers, weighers	794	53.8	13.0	7.7
Mach. oper., tenders, exc. precision	5,235	43.1	15.0	9.8	Prod. inspec., checkers, examiners	624	54.9	13.4	6.6
Metalworking, plastic mach. operators	499	16.6	11.4	6.7	Production testers	58	37.4	8.0	3.8
Lathe, turning mach. operators	78	9.2	10.0	6.1	Graders, sorters, exc. agricultural	103	58.6	13.5	16.5
Punching, stamp. press mach. oper.	114	33.0	14.3	4.3					
Grinding, abrading operators	151	14.0	12.9	11.2	**Transportation, material moving occup.**	**4,201**	**7.8**	**13.0**	**5.9**
Metal, plastic process. mach. oper.	172	23.0	13.1	12.2	Motor vehicle operators	2,978	9.2	13.5	6.0
Molding, casing machine operators	102	30.9	12.5	13.0					

SOURCE: Employment and Earnings, January 1984, p. 178-182, Bureau of Labor Statistics

TABLE 4-8 (continued)

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX AND RACE, 1983

(Numbers in thousands)

Occupation	Total Employed	Percent of Total			Occupation	Total Employed	Percent of Total		
		Women	Black	Hispanic Origin			Women	Black	Hispanic Origin
Transportation continued					**Handlers continued**				
Motor vehicle operators continued					Freight, stock, material handlers	1,488	15.4	15.3	7.1
Truck drivers, heavy	1,771	2.1	12.8	5.1	Garbage collectors	63	1.0	38.0	8.2
Truck drivers, light	424	7.6	10.4	8.3	Stock handlers, baggers	815	20.7	9.4	6.9
Drivers-sales workers	200	7.6	5.2	3.6	Machine feeders, offbearers	88	32.1	22.7	5.0
Bus drivers	365	45.5	22.2	7.0	Garage, service station related occupations	293	4.6	8.8	7.3
Taxi-cab drivers, chauffeurs	148	10.4	19.6	8.6	Vehicle washers, equipment cleaners	175	14.7	22.3	12.4
Transportation occup. exc. motor vehicle	212	2.4	6.7	3.0	Hand packers, packagers	286	67.0	13.6	7.7
Rail transportation occupations	154	2.0	7.8	3.1	Laborers, except construction	1,024	19.4	16.0	8.6
Locomotive operating occup.	64	2.3	8.5	1.7					
Railroad brake, signal, switch oper.	50	1.5	8.7	6.0	**Farming, forestry, fishing**	**3,700**	**16.0**	**7.5**	**8.2**
Water transportation occupations	58	3.5	3.7	2.9	Farm operators, managers	1,450	12.1	1.3	0.7
Material moving equip. operators	1,011	4.8	12.9	6.3	Farmers	1,369	12.1	1.2	0.7
Operating engineers	145	0.4	6.8	3.8	Farm managers	81	10.5	3.0	1.7
Crane, tower operators	93	1.3	15.6	2.6	Other agricultural, related occupations	2,072	19.9	11.7	14.0
Excavating, load. mach. operators	98	1.2	5.9	6.2	Farm occupations, exc. managerial	1,216	24.4	11.3	16.0
Grader, dozer, scraper operators	112	0.2	7.7	4.9	Farm workers	1,149	24.8	11.6	15.9
Industrial truck, tractor equip. oper.	369	5.6	19.6	8.2	Related agricultural occupations	855	13.6	12.3	11.2
Handlers, equip. cleaners, helpers, laborers	**4,147**	**16.8**	**15.1**	**6.6**	Supervisors	99	5.0	5.6	10.4
Helpers, construction, extractive occup.	167	13.0	11.4	10.9	Groundskeepers, gardeners, exc. farm	645	6.8	14.7	11.6
Helpers, construction trades	153	2.9	11.5	11.5	Animal caretakers, exc. farm	97	60.0	3.2	5.9
Construction laborers	595	2.1	16.1	11.3	Forestry, logging occupations	126	1.4	12.8	2.1
Production helpers	75	24.4	13.7	9.1	Timber cutting, logging	96	*	14.4	2.3
					Fishers, hunters, trappers	53	4.5	1.8	2.5

* Less than 0.05 percent.

Note: N.e.c. is an abbreviation for "not elsewhere classified" and designates broad categories of occupations which cannot be more specifically identified.

SMC Note: BLS includes all academically employed professionals under "Teachers," thus reducing the number of professionals in many fields to less than 25,000. This table includes only occupations of 25,000 or more persons. This table cannot be compared with similar tables in previous editions of PW&M because of change of definitions.

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-9

Professional and Technical Workers by Occupation, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
CIVILIAN LABOR FORCE, 16 YEARS AND OVER	104449817 100.00%	59926488 57.37%	49800137 47.68%	5254596 5.03%	311862 0.30%	908824 0.87%	58011 0.06%	3593058 3.44%	44523329 42.63%	35877061 34.35%	5182629 4.96%	234595 0.22%	787596 0.75%	41783 0.04%	2399665 2.30%
Accountants and Auditors	1012857 100.00%	626558 61.86%	563916 55.68%	23174 2.29%	1272 0.13%	19212 1.90%	582 0.06%	18422 1.82%	386299 38.14%	324773 32.07%	30540 3.02%	1553 0.15%	15608 1.54%	445 0.04%	13380 1.32%
Actuaries	10319 100.00%	7682 74.45%	7280 70.55%	91 0.88%	0 0.00%	259 2.51%	6 0.06%	46 0.45%	2637 25.55%	2437 23.62%	94 0.91%	0 0.00%	78 0.76%	0 0.00%	28 0.27%
Agricultural/Food Scientists	24589 100.00%	19009 77.31%	17236 70.10%	797 3.24%	47 0.19%	438 1.78%	12 0.05%	479 1.95%	5580 22.69%	4780 19.44%	437 1.78%	37 0.15%	198 0.81%	0 0.00%	128 0.52%
Airplane Pilots/ Navigators	76188 100.00%	75149 98.64%	72545 95.22%	630 0.83%	285 0.37%	445 0.58%	50 0.07%	1194 1.57%	1039 1.36%	922 1.21%	26 0.03%	0 0.00%	13 0.02%	0 0.00%	78 0.10%
Architects	107693 100.00%	98743 91.69%	88047 81.76%	2643 2.45%	178 0.17%	3769 3.50%	123 0.11%	3983 3.70%	8950 8.31%	7852 7.29%	303 0.28%	30 0.03%	395 0.37%	0 0.00%	370 0.34%
Archivists/Curators	15302 100.00%	7735 50.55%	6743 44.07%	525 3.43%	33 0.22%	163 1.07%	6 0.04%	265 1.73%	7567 49.45%	6694 43.75%	551 3.60%	51 0.33%	71 0.46%	9 0.06%	191 1.25%
Artists/Performers/ Related Workers	49653 100.00%	29356 59.12%	25242 50.84%	1693 3.41%	220 0.44%	484 0.97%	61 0.12%	1656 3.34%	20297 40.88%	18418 37.09%	807 1.63%	126 0.25%	313 0.63%	65 0.13%	570 1.15%
Actors/Directors	67180 100.00%	44049 65.57%	39591 58.93%	2384 3.55%	191 0.28%	513 0.76%	17 0.03%	1353 2.01%	23131 34.43%	20343 30.28%	756 1.13%	76 0.11%	337 0.50%	29 0.04%	890 1.32%
Authors	45748 100.00%	25409 55.54%	23809 52.04%	592 1.29%	85 0.19%	276 0.60%	56 0.12%	591 1.29%	20339 44.46%	19094 41.74%	616 1.35%	64 0.14%	166 0.36%	43 0.09%	356 0.78%
Dancers	13194 100.00%	3350 25.39%	2631 19.94%	317 2.40%	19 0.14%	140 1.06%	0 0.00%	243 1.84%	9844 74.61%	7934 60.13%	817 6.19%	83 0.63%	448 3.40%	18 0.14%	544 4.12%
Musicians/Composers	140556 100.00%	99065 70.48%	84413 60.06%	7157 5.09%	486 0.35%	1393 0.99%	143 0.10%	5473 3.89%	41491 29.52%	38021 27.05%	1942 1.38%	152 0.11%	628 0.45%	29 0.02%	719 0.51%
Painters/Sculptors/ Artists	153162 100.00%	79445 51.87%	69374 45.29%	3316 2.17%	653 0.43%	1938 1.27%	112 0.07%	4052 2.65%	73717 48.13%	68794 44.92%	1474 0.96%	415 0.27%	1388 0.91%	73 0.05%	1573 1.03%
Photographers	94762 100.00%	72496 76.50%	63991 67.53%	3832 4.04%	207 0.22%	1366 1.44%	115 0.12%	2985 3.15%	22266 23.50%	20158 21.31%	952 1.00%	139 0.15%	212 0.22%	0 0.00%	765 0.81%

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-9 (continued)

Professional and Technical Workers by Occupation, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Atmospheric/Space Scientists	8415 100.00%	6986 83.02%	6383 75.85%	281 3.34%	45 0.53%	106 1.26%	26 0.31%	145 1.72%	1429 16.98%	1219 14.49%	129 1.53%	2 0.02%	26 0.31%	0 0.00%	53 0.63%
Biological/Life Scientists	46079 100.00%	30840 66.93%	27825 60.39%	871 1.89%	60 0.13%	1483 3.22%	60 0.13%	541 1.17%	15239 33.07%	12898 27.99%	806 1.75%	52 0.11%	1012 2.20%	32 0.07%	439 0.95%
Chemists, ex. Biochemists	102239 100.00%	81699 79.91%	70725 69.18%	3571 3.49%	145 0.14%	5322 5.21%	142 0.14%	1794 1.75%	20540 20.09%	15849 15.50%	1456 1.42%	58 0.05%	2348 2.30%	39 0.04%	792 0.77%
Clergy	283044 100.00%	266610 94.19%	242223 85.58%	15093 5.33%	691 0.24%	3113 1.10%	159 0.06%	5331 1.88%	16434 5.81%	14681 5.19%	952 0.34%	68 0.02%	155 0.05%	10 0.00%	568 0.20%
Computer Programmers	317873 100.00%	218716 68.85%	193052 60.77%	9890 3.11%	604 0.19%	8845 2.78%	246 0.08%	6079 1.91%	98957 31.15%	82561 25.99%	7856 2.47%	266 0.08%	5478 1.72%	116 0.04%	2680 0.84%
Computer Systems Analysts/Scientists	202651 100.00%	157140 77.54%	141521 69.83%	5999 2.96%	369 0.18%	5435 2.68%	175 0.09%	3641 1.80%	45511 22.46%	38952 19.22%	3405 1.68%	170 0.08%	1772 0.87%	50 0.02%	1162 0.57%
Counselors, Educational/ Vocational	198258 100.00%	90587 45.69%	73447 37.05%	10607 5.35%	1059 0.53%	1219 0.61%	93 0.05%	4162 2.10%	107669 54.31%	83405 42.07%	17183 8.67%	1379 0.70%	1395 0.70%	99 0.05%	4208 2.12%
Designers	338374 100.00%	169604 50.12%	151191 44.68%	5928 1.75%	481 0.14%	4578 1.35%	174 0.05%	7252 2.14%	168770 49.88%	154070 45.53%	4834 1.43%	333 0.10%	3458 1.02%	109 0.03%	5966 1.76%
Dieticians	67270 100.00%	6787 10.09%	4224 6.28%	1907 2.83%	25 0.04%	179 0.27%	27 0.04%	425 0.63%	60483 89.91%	43289 64.35%	12493 18.57%	307 0.46%	2304 3.43%	32 0.05%	2058 3.06%
Economists	95565 100.00%	67218 70.34%	61773 64.64%	2096 2.19%	169 0.18%	1599 1.67%	98 0.10%	1483 1.55%	28347 29.66%	25241 26.41%	1828 1.91%	68 0.07%	565 0.59%	37 0.04%	608 0.64%
Editors/Reporters	210831 100.00%	106942 50.72%	97786 46.37%	3292 1.56%	271 0.13%	1886 0.89%	162 0.08%	3585 1.70%	103889 49.28%	93820 44.50%	4161 1.97%	339 0.16%	1499 0.71%	148 0.07%	3922 1.86%
Engineers*	1445042 100.00%	1388801 6.11%	1252362 86.66%	29420 2.04%	3023 0.21%	59967 4.15%	1734 0.12%	30304 2.10%	56241 3.89%	44494 3.08%	4527 0.31%	225 0.02%	2674 0.19%	98 0.01%	1564 0.11%
Forestry/Conservation Scientists	35587 100.00%	31985 89.93%	29662 83.40%	955 2.69%	467 1.31%	205 0.58%	33 0.09%	663 1.86%	3582 10.07%	3133 8.81%	188 0.53%	69 0.19%	63 0.18%	0 0.00%	129 0.36%
Geologists/Geodesists	46127 100.00%	40985 88.85%	38969 84.48%	488 1.06%	85 0.18%	621 1.35%	46 0.10%	776 1.68%	5142 11.15%	4768 10.34%	205 0.44%	10 0.02%	91 0.20%	5 0.01%	63 0.14%

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-9 (continued)

Executives and Managers by Field, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Executive and Managerial Occupations	14465792	10703261	9616261	486311	38014	146882	7919	407874	3762531	3228159	297396	17307	58456	3161	158052
	100.00%	73.99%	66.48%	3.36%	0.26%	1.02%	0.05%	2.82%	26.01%	22.32%	2.06%	0.12%	0.40%	0.02%	1.09%
Business/Promotion Agents	20887	13780	12183	806	34	134	12	611	6827	6227	321	25	79	7	168
	100.00%	65.97%	59.12%	3.91%	0.16%	0.65%	0.06%	2.97%	33.13%	30.22%	1.56%	0.12%	0.38%	0.03%	0.82%
Education/Related Fields Administrators	387538	239766	210678	20154	945	1718	158	6113	147772	121224	19193	1050	1532	101	4672
	100.00%	61.87%	54.38%	5.20%	0.24%	0.44%	0.04%	1.58%	38.13%	31.28%	4.95%	0.27%	0.40%	0.03%	1.21%
Financial Managers	409844	281218	261088	6792	402	5242	141	7553	128626	116748	5989	317	1676	74	3822
	100.00%	68.62%	63.70%	1.66%	0.10%	1.28%	0.03%	1.84%	31.38%	28.49%	1.46%	0.08%	0.41%	0.02%	0.93%
Managers/Administrators, Misc., Salaried	4858661	3404912	3120455	112058	9748	53899	2792	105960	1253749	1111272	75864	5482	18142	1170	42019
	100.00%	73.09%	66.98%	2.41%	0.21%	1.16%	0.06%	2.27%	26.91%	23.85%	1.62%	0.12%	0.39%	0.03%	0.90%
Managers/Administrators Misc., Self-Employed	573848	419897	377417	12241	1258	12124	540	16117	154149	136580	4897	635	6003	159	6075
	100.00%	73.14%	65.77%	2.13%	0.22%	2.11%	0.09%	2.81%	26.86%	23.80%	0.82%	0.11%	1.05%	0.03%	1.06%
Marketing/Advertising/ Related Fields Mgrs.	688875	567382	540409	9064	990	5348	280	11293	121513	111891	4310	327	1485	93	3427
	100.00%	82.38%	78.46%	1.32%	0.14%	0.78%	0.04%	1.64%	17.64%	16.24%	0.63%	0.05%	0.21%	0.01%	0.50%
Medicine/Health Managers	110881	54583	48300	3872	205	709	38	1459	56298	47788	5608	359	805	16	1724
	100.00%	49.23%	43.56%	3.49%	0.18%	0.64%	0.03%	1.32%	50.77%	43.10%	5.06%	0.32%	0.73%	0.01%	1.56%
Personnel/Labor Relations Managers	219945	140747	124144	8051	439	1777	89	6247	79198	68296	6198	302	1142	54	3206
	100.00%	63.99%	56.44%	3.66%	0.20%	0.81%	0.04%	2.84%	36.01%	31.05%	2.82%	0.14%	0.52%	0.02%	1.46%
Properties/Real Estate Managers	200072	117835	100921	7659	584	1317	128	7246	82237	73054	4879	493	824	39	2948
	100.00%	58.90%	50.44%	3.83%	0.28%	0.66%	0.06%	3.62%	41.10%	36.51%	2.44%	0.25%	0.41%	0.02%	1.47%
Proprietors/Supervisors/ Sales, Self-Employed	451356	324838	293777	9577	920	7967	272	12325	126518	114264	3844	538	3655	89	4350
	100.00%	71.97%	65.09%	2.12%	0.20%	1.77%	0.06%	2.73%	28.03%	25.32%	0.81%	0.12%	0.81%	0.02%	0.96%
Protective Services Administrators	26237	23769	22141	824	144	98	7	555	2468	2053	270	21	19	7	101
	100.00%	90.59%	84.39%	3.14%	0.55%	0.37%	0.03%	2.12%	9.41%	7.82%	1.03%	0.08%	0.06%	0.03%	0.38%
Public Administration Administrators/Officials	295983	196465	171787	13402	1861	2615	188	6612	99518	83182	11013	818	1053	73	3379
	100.00%	66.38%	58.04%	4.53%	0.63%	0.88%	0.06%	2.23%	33.62%	28.10%	3.72%	0.28%	0.36%	0.02%	1.14%
Public Administration Chief Exec./ Gen. Adminis.	35777	27458	22418	3104	429	251	35	1223	8319	6078	1655	111	148	12	315
	100.00%	76.75%	62.65%	8.68%	1.20%	0.70%	0.10%	3.42%	23.25%	16.99%	4.63%	0.31%	0.41%	0.03%	0.88%
Purchasing Managers	71199	56088	52456	1433	131	655	49	1364	15111	13389	1018	48	235	15	410
	100.00%	78.78%	73.68%	2.01%	0.18%	0.92%	0.07%	1.92%	21.22%	18.81%	1.43%	0.06%	0.33%	0.02%	0.58%

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-9 (continued)

Professional and Technical Workers by Occupation, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Lawyers	501834	432559	412528	9224	750	2710	332	7017	69275	61893	4226	207	943	93	1913
	100.00%	86.20%	82.20%	1.84%	0.15%	0.54%	0.07%	1.40%	13.80%	12.33%	0.84%	0.04%	0.19%	0.02%	0.38%
Judges	27845	23083	21213	1162	130	124	23	431	4762	4051	521	50	18	0	122
	100.00%	82.90%	76.18%	4.17%	0.47%	0.45%	0.08%	1.55%	17.10%	14.55%	1.87%	0.18%	0.06%	0.00%	0.44%
Legislators	10869	7112	6192	399	253	118	4	146	3557	3233	166	85	48	11	34
	100.00%	66.66%	58.04%	3.74%	2.37%	1.11%	0.04%	1.37%	33.34%	30.30%	1.56%	0.61%	0.45%	0.10%	0.32%
Librarians	187379	32779	27836	2347	120	1056	72	1348	154600	136708	11366	499	2876	123	3028
	100.00%	17.49%	14.86%	1.25%	0.06%	0.56%	0.04%	0.72%	82.51%	72.98%	6.07%	0.27%	1.53%	0.07%	1.62%
Mathematical Scientists, Misc.	6401	5188	4578	248	25	200	7	132	1213	959	179	0	60	0	15
	100.00%	81.05%	71.49%	3.87%	0.39%	3.12%	0.11%	2.06%	18.95%	14.98%	2.80%	0.00%	0.94%	0.00%	0.23%
Medical Scientists	20065	11904	10348	434	23	673	33	393	8161	6870	441	28	558	25	239
	100.00%	59.33%	51.57%	2.16%	0.11%	3.35%	0.16%	1.96%	40.67%	34.24%	2.20%	0.14%	2.78%	0.12%	1.19%
Medical/Health Practitioners	125291	116916	108990	2666	167	3226	55	1812	8375	6890	468	18	806	12	381
	100.00%	93.32%	86.99%	2.13%	0.13%	2.57%	0.04%	1.45%	6.68%	5.50%	0.37%	0.01%	0.48%	0.01%	0.30%
Dentists	435178	14764	10652	2910	128	322	19	734	420412	322480	74942	2662	5575	425	14328
	100.00%	3.39%	2.45%	0.67%	0.03%	0.07%	0.00%	0.17%	96.61%	74.10%	17.22%	0.61%	1.28%	0.10%	3.29%
Nurses, Licensed Practical	1285299	52755	42805	5383	175	1892	110	2610	1232544	1071709	90003	3681	41054	1161	24930
	100.00%	4.10%	3.31%	0.42%	0.01%	0.15%	0.01%	0.20%	95.90%	83.38%	7.00%	0.29%	3.19%	0.09%	1.94%
Nurses, Registered	24805	22589	21544	198	38	481	8	322	2038	1765	58	8	97	0	110
	100.00%	91.73%	87.56%	0.80%	0.15%	1.87%	0.03%	1.31%	8.27%	7.17%	0.23%	0.03%	0.39%	0.00%	0.45%
Optometrists	145637	110635	101051	2949	158	4313	136	2028	35002	29385	1766	89	2269	29	1464
	100.00%	75.97%	69.39%	2.02%	0.11%	2.96%	0.09%	1.39%	24.03%	20.18%	1.21%	0.06%	1.56%	0.02%	1.01%
Pharmacists	433255	376289	317142	10090	388	30656	732	18283	57966	40700	3153	127	11262	154	2570
	100.00%	86.82%	73.20%	2.33%	0.09%	7.08%	0.17%	3.76%	13.38%	9.39%	0.73%	0.03%	2.60%	0.04%	0.59%
Physicians	7781	7124	6805	203	0	54	0	62	657	538	78	0	41	0	0
	100.00%	91.56%	87.46%	2.61%	0.00%	0.69%	0.00%	0.80%	8.44%	8.91%	1.00%	0.00%	0.53%	0.00%	0.00%
Podiatrists	34355	29797	28708	402	58	359	23	251	4558	4218	128	0	73	8	137
	100.00%	86.73%	83.56%	1.17%	0.16%	1.04%	0.07%	0.73%	13.27%	12.27%	0.35%	0.02%	0.21%	0.02%	0.40%
Veterinarians	21539	18851	17954	191	28	444	18	216	2688	2375	71	8	134	0	102
	100.00%	87.52%	83.36%	0.89%	0.13%	2.06%	0.08%	1.00%	12.48%	11.03%	0.33%	0.03%	0.62%	0.00%	0.47%
Health Diagnosing Practitioners, Misc.															

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-9 (continued)

Professional and Technical Workers by Occupation, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Management Analysts	118581	88652	82171	2994	296	1262	120	1809	29929	25971	2483	177	410	31	857
	100.00%	74.76%	69.30%	2.52%	0.25%	1.06%	0.10%	1.53%	25.24%	21.90%	2.09%	0.15%	0.35%	0.03%	0.72%
Operations/Systems Researchers/Analysts	80876	58435	52908	2458	158	1488	70	1353	22441	18860	2418	81	557	8	519
	100.00%	72.25%	65.42%	3.04%	0.20%	1.84%	0.09%	1.67%	27.75%	23.32%	2.99%	0.10%	0.69%	0.01%	0.64%
Physicists/Astronomers	22473	21253	19352	314	30	1152	81	324	1220	1102	41	0	40	0	37
	100.00%	94.57%	86.11%	1.40%	0.13%	5.13%	0.36%	1.44%	5.43%	4.90%	0.18%	0.00%	0.18%	0.00%	0.16%
Psychologists	92929	49102	44635	2362	143	515	68	1379	43827	37766	4100	193	546	94	1128
	100.00%	52.84%	48.03%	2.54%	0.15%	0.55%	0.07%	1.48%	47.16%	40.64%	4.41%	0.21%	0.59%	0.10%	1.21%
Public Relations Specialists	120037	61442	55764	2980	189	768	88	1655	58595	52340	3495	265	667	28	1810
	100.00%	51.19%	46.46%	2.48%	0.16%	0.64%	0.07%	1.38%	48.81%	43.60%	2.91%	0.22%	0.55%	0.02%	1.51%
Social Scientists, Misc.	13477	8177	7483	214	38	172	19	251	5300	4739	242	30	95	5	189
	100.00%	60.67%	55.52%	1.59%	0.28%	1.28%	0.14%	1.86%	39.33%	35.16%	1.80%	0.22%	0.70%	0.04%	1.40%
Sociologists	2550	1489	1294	111	0	44	0	40	1061	927	42	12	48	0	32
	100.00%	58.39%	50.75%	4.35%	0.00%	1.73%	0.00%	1.57%	41.61%	36.35%	1.65%	0.47%	1.88%	0.00%	1.25%
Social Workers	459984	161258	118446	26559	1623	2601	271	11758	298726	215573	60946	2565	3765	403	15474
	100.00%	35.06%	25.75%	5.77%	0.35%	0.57%	0.06%	2.56%	64.94%	46.87%	13.25%	0.56%	0.82%	0.09%	3.36%
Statisticians	30200	15684	13711	786	41	733	15	398	14516	11917	1695	57	497	11	439
	100.00%	51.93%	45.40%	2.60%	0.14%	2.43%	0.05%	1.32%	48.07%	39.46%	5.28%	0.19%	1.65%	0.04%	1.45%
Surveying/Mapping Scientists	31634	30313	28089	713	279	222	16	994	1321	1173	44	13	10	8	73
	100.00%	95.82%	88.79%	2.25%	0.88%	0.70%	0.05%	3.14%	4.18%	3.71%	0.14%	0.04%	0.03%	0.03%	0.23%
Teachers, Elem./Secondary	33635.1	950590	842201	67854	3765	8798	810	27162	2412924	2036833	271570	10096	24329	1439	68857
	100.00%	28.26%	25.04%	2.02%	0.11%	0.26%	0.02%	0.81%	71.74%	60.56%	8.07%	0.30%	0.72%	0.04%	2.04%
Teachers, Postsecondary*	995755	540289	481153	23872	1918	18007	921	14418	455466	401387	30443	1751	8608	463	12814
	100.00%	54.26%	48.32%	2.40%	0.19%	1.81%	0.09%	1.45%	45.74%	40.31%	3.06%	0.18%	0.86%	0.05%	1.29%
Technical Writers	49596	30984	28753	1097	100	475	29	530	18612	16864	1156	81	160	23	328
	100.00%	62.47%	57.97%	2.21%	0.20%	0.96%	0.06%	1.07%	37.53%	34.00%	2.33%	0.16%	0.32%	0.05%	0.66%
Urban Planners	13337	10128	8732	646	81	274	8	387	3209	2561	441	16	58	0	133
	100.00%	75.94%	65.47%	4.84%	0.61%	2.05%	0.06%	2.90%	24.06%	19.20%	3.31%	0.12%	0.43%	0.00%	1.00%
Underwriters	18597	7752	7021	393	12	127	0	199	10845	9522	774	21	105	11	412
	100.00%	41.68%	37.75%	2.11%	0.06%	0.68%	0.00%	1.07%	58.32%	51.20%	4.16%	0.11%	0.56%	0.06%	2.22%

* Further breakouts are in the subject matter sections

SOURCE: Characteristics of Doctoral Scientists and Engineers, 1981, National Science Foundation, NSF 82-332 and Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-10

DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX, RACE AND HISPANIC ORIGIN 1981

FIELD		All Races		White		Black		American Indian		Asian		Hispanic**		No Report
	Sex	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
TOTAL	**Total**	**363,866**		**322,853**	**88.7**	**4,609**	**1.3**	**2,325**	**0.6**	**27,857**	**7.76**	**5,000**	**1.4**	**6,222**
ALL FIELDS	**Women**	**45,747**	**12.6**	**40,653**		**1,098**		**320**		**3,113**		**600**	**1.3**	**563**
PHYSICAL	**Total**	**67,693**		**59,740**	**88.3**	**644**	**1.0**	**296**	**0.4**	**5,838**	**8.6**	**900**	**1.3**	**1,175**
SCIENTISTS	**Women**	**4,354**	**6.4**	**3,540**		**41**		**8**		**696**		**100**	**2.3**	**69**
Chemists	Total	45,376		40,150	88.5	380	0.8	201	0.4	3,898	8.6	600	1.3	747
	Women	3,658	8.1	2,935		34		8		617		100	2.7	64
Physicists/	Total	22,317		19,590	87.8	264	1.2	95	0.4	1,940	8.7	300	1.3	428
Astronomers	Women	696	3.1	605		7		*		79		*		5
MATHEMATICAL	**Total**	**16,470**		**14,486**	**88.0**	**200**	**1.2**	**74**	**0.4**	**1,221**	**7.4**	**300**	**1.8**	**489**
SCIENTISTS	**Women**	**1,463**	**8.9**	**1,232**		**17**		**20**		**178**		*		**16**
Mathema-	Total	13,819		12,256	88.7	177	1.3	54	0.4	937	6.8	200	1.4	393
ticians	Women	1,166	8.4	1,015		17		2		116		*		16
Statis-	Total	2,651		2,228	84.0	23	0.9	20	0.8	284	10.7	*		96
ticians	Women	297	11.2	217		*		18		62		*		*
COMPUTER	**Total**	**9,066**		**7,942**	**87.6**	**20**	**0.2**	**17**	**0.2**	**886**	**9.8**	**100**	**1.1**	**201**
SCIENTISTS	**Women**	**714**	**7.9**	**589**		**3**		**3**		**97**		*		**22**
ENVIRON.	**Total**	**16,589**		**15,547**	**93.7**	**41**	**0.2**	**56**	**0.3**	**749**	**4.5**	**100**	**0.6**	**196**
SCIENTISTS	**Women**	**906**	**5.5**	**833**		**10**		**5**		**50**		*		**8**
Earth	Total	12,605		11,845	94.0	32	0.3	47	0.4	535	4.2	100	0.8	146
Scientists	Women	615	4.9	570		8		5		16		*		8
Oceano-	Total	1,818		1,701	93.6	7	0.4	7	0.4	102	5.6	100	5.5	1
graphers	Women	206	11.3	197		2		*		7		*		*
Atmospheric	Total	2,166		2,001	92.4	2	0.1	2	0.1	112	5.2	*		49
Scientists	Women	85	3.9	58		*		*		27		*		*
ENGINEERS	**Total**	**58,311**		**47,678**	**81.8**	**270**	**0.5**	**437**	**0.7**	**9,055**	**15.5**	**700**	**1.2**	**871**
	Women	**783**	**1.3**	**623**		**7**		**14**		**127**		*		**12**
LIFE	**Total**	**93,848**		**84,329**	**89.9**	**1,185**	**1.3**	**551**	**0.6**	**6,416**	**6.8**	**1,300**	**1.4**	**1,367**
SCIENTISTS	**Women**	**15,221**	**16.2**	**13,285**		**330**		**109**		**1,388**		**200**	**1.3**	**109**
Biological	Total	54,442		48,663	89.4	663	1.2	335	0.6	4,025	7.4	600	1.1	756
Scientists	Women	10,646	19.6	9,281		248		95		944		100	0.9	701
Agricultural	Total	17,270		15,998	92.6	209	1.2	113	0.7	771	4.5	200	1.1	179
Scientists	Women	530	3.1	419		3		2		104		*		2
Medical	Total	22,136		19,668	88.9	313	1.4	103	0.5	1,620	7.3	400	1.8	432
Scientists	Women	4,045	18.3	3,585		79		12		340		100	2.5	29
PSYCHO-	**Total**	**45,416**		**42,666**	**93.9**	**853**	**1.9**	**475**	**1.0**	**609**	**1.3**	**700**	**1.5**	**813**
LOGISTS	**Women**	**12,817**	**28.2**	**11,854**		**390**		**126**		**254**		**100**	**0.8**	**193**
SOCIAL	**Total**	**56,473**		**50,465**	**89.4**	**1,396**	**2.5**	**419**	**0.7**	**3,083**	**5.5**	**900**	**1.6**	**1,110**
SCIENTISTS	**Women**	**9,489**	**16.8**	**8,697**		**300**		**35**		**323**		**200**	**2.1**	**134**
Economists	Total	14,294		12,574	88.0	234	1.6	242	1.7	1,165	8.2	300	2.1	79
	Women	1,263	8.8	1,175		12		4		58		*		14
Sociologists/	Total	11,909		10,804	90.7	343	2.9	65	0.5	427	3.6	200	1.7	270
Anthropol.	Women	3,270	27.5	2,980		101		16		98		*		75
Other Social	Total	30,270		27,087	89.5	819	2.7	112	0.4	1,491	4.9	400	1.3	761
Scientists	Women	4,956	16.4	4,542		187		15		167		*		45

* No cases reported. **Estimated Hispanics also are included in other racial groups.

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1981, National Science Foundation, NSF 82-332

TABLE 4-11

DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, YEARS OF PROFESSIONAL EXPERIENCE AND SEX, 1981

FIELD	SEX	YEARS OF PROFESSIONAL EXPERIENCE																				
		1 or Less		2-4 Years		5-9 Years		10-14 Years		15-19 Years		20-24 Years		25-29 Years		30-34 Years		35-39 Years		40 or More		Total
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
All Fields	Total	5,226	1.4	28,389	7.8	60,680	16.7	64,101	17.6	43,322	11.9	33,476	9.2	26,422	7.3	21,712	6.0	11,343	3.1	10,585	2.9	363,866
	Women	1,374	3.0	6,460	14.1	12,264	26.8	7,648	16.7	3,947	8.6	2,527	5.5	1,885	4.1	1,354	3.0	854	1.9	850	1.9	45,747
Chemists	Total	755	1.7	3,661	8.1	6,488	14.3	6,937	15.3	5,108	11.3	4,563	10.1	3,931	8.7	2,707	6.0	2,155	4.7	2,437	5.4	45,376
	Women	145	4.0	559	15.3	819	22.4	496	13.6	271	7.4	244	6.7	176	4.8	169	4.6	79	2.2	81	2.2	3,658
Physicists/ Astronomers	Total	348	1.6	1,638	7.3	3,287	14.7	4,371	19.6	2,977	13.3	2,261	10.1	1,620	7.3	1,250	5.6	743	3.3	666	3.0	22,317
	Women	17	2.4	92	13.2	200	28.7	118	17.0	60	8.6	42	6.0	32	4.6	13	1.9	8	1.1	9	1.3	696
Mathematicians	Total	137	1.0	951	6.9	1,729	12.5	2,349	17.0	2,092	15.1	1,313	9.5	992	7.2	667	4.8	369	2.7	416	3.0	13,819
	Women	15	1.3	121	10.4	296	25.4	166	14.2	124	10.6	62	5.3	76	6.5	42	3.6	32	2.7	40	3.4	1,166
Statisticians	Total	25	0.9	169	6.4	572	21.6	406	15.3	361	13.6	278	10.5	218	8.2	118	4.5	102	3.8	110	4.1	2,651
	Women	25	8.4	44	14.8	85	28.6	48	16.2	31	10.4	7	2.4	5	1.7	4	1.3	6	2.0	6	2.0	297
Computer Scientists	Total	98	1.1	670	7.4	2,132	23.5	2,232	24.6	1,114	12.3	462	5.1	439	4.8	378	4.2	100	1.1	52	0.6	9,066
	Women	9	1.3	128	17.9	253	35.4	124	17.4	44	6.2	24	3.4	4	0.6	3	0.4	*	-	2	0.3	714
Environmental Scientists	Total	284	1.7	1,253	7.6	2,889	17.4	2,862	17.3	2,341	14.1	1,677	10.1	996	6.0	1,101	6.6	468	2.8	558	3.4	16,589
	Women	30	3.3	132	14.6	304	33.6	129	14.2	67	7.4	78	8.6	25	2.8	8	0.9	10	1.1	19	2.1	906
Engineers	Total	513	0.9	3,292	5.6	8,023	13.8	10,856	18.6	8,039	13.8	6,946	11.9	4,527	7.8	3,972	6.8	1,895	3.2	1,328	2.3	58,311
	Women	48	6.1	132	16.9	238	30.4	138	17.6	47	6.0	39	5.0	19	2.4	10	1.3	5	0.6	2	0.3	783
Biological Scientists	Total	1,239	2.3	5,483	10.1	10,067	18.5	9,597	17.6	5,429	10.0	4,442	8.2	3,771	6.9	2,892	5.3	1,352	2.5	1,493	2.7	54,442
	Women	424	4.0	1,636	15.4	2,696	25.3	1,656	15.6	859	8.1	584	5.5	426	4.0	336	3.2	205	1.9	203	1.9	10,646
Agricultural Scientists	Total	144	0.8	1,133	6.6	2,570	14.9	2,356	13.6	2,128	12.3	1,777	10.3	1,801	10.4	1,435	8.3	754	4.4	540	3.1	17,270
	Women	19	3.6	124	23.4	135	25.5	103	19.4	43	8.1	14	2.6	12	2.3	14	2.6	10	1.9	6	1.1	530
Medical Scientists	Total	596	2.7	2,395	10.8	3,795	17.1	3,312	15.0	2,321	10.5	2,021	9.1	1,469	6.6	1,088	4.9	670	3.0	489	2.2	22,136
	Women	150	3.7	554	13.7	886	21.9	555	13.7	383	9.5	282	7.0	265	6.6	169	4.2	124	3.1	76	1.9	4,045
Psychologists	Total	446	1.0	4,279	9.4	9,894	21.8	8,086	17.8	4,307	9.5	3,165	7.0	3,289	7.2	2,805	6.2	987	2.2	816	1.8	45,416
	Women	253	2.0	1,739	13.6	3,862	30.1	2,170	16.9	1,058	8.3	689	5.4	524	4.1	359	2.8	249	1.9	197	1.5	12,817
Economists	Total	150	1.0	946	6.6	1,878	13.1	2,786	19.5	1,698	11.9	1,078	7.5	905	6.3	920	6.4	427	3.0	571	4.0	14,294
	Women	18	1.4	146	11.6	262	20.7	310	24.5	134	10.6	92	7.3	24	1.9	41	3.2	23	1.8	45	3.6	1,263
Sociologists/ Anthropologists	Total	154	1.3	704	5.9	2,358	19.8	2,082	17.5	1,511	12.7	964	8.1	632	5.3	659	5.5	362	3.0	344	2.9	11,909
	Women	66	2.0	389	11.9	930	28.4	659	20.2	367	11.2	137	4.2	129	3.9	62	1.9	46	1.4	74	2.3	3,270
Other Social Scientists	Total	337	1.1	1,815	6.0	4,998	16.5	5,870	19.4	3,896	12.9	2,529	8.4	1,832	6.1	1,720	5.7	959	3.2	765	2.5	30,270
	Women	155	3.1	664	13.4	1,298	26.2	976	19.7	459	9.3	233	4.7	168	3.4	124	2.5	57	1.2	90	1.8	4,956

SOURCE: Science, Engineering and Humanities Doctorates in the United States: 1983 Profile, National Research Council, 1984

TABLE 4-12

SEX, RACE AND CITIZENSHIP OF U.S. DOCTORATES BY FIELD, 1983

Demographic Characteristics	All Fields	Field of Doctorate										
		Math	Comp Sci	Phys Astrn	Chem	Earth/ Envir	Engr	Agric	Med	Biol	Psych	Social Sci
Total Population (N)	387,300	19,600	2,600	30,300	50,000	12,900	57,500	18,900	14,700	69,500	51,300	60,000
	%	%	%	%	%	%	%	%	%	%	%	%
Sex												
Male	86.4	91.2	91.0	96.7	92.1	94.1	98.7	95.5	77.3	80.0	70.1	81.6
Female	13.6	8.8	9.0	3.3	7.9	5.9	1.3	4.5	22.7	20.0	29.9	18.4
Racial/Ethnic Group												
White	87.9	87.9	89.6	88.5	87.2	93.0	78.2	89.2	86.9	89.6	93.5	89.0
Minority Group	10.8	10.3	9.4	9.8	11.6	6.1	20.5	9.4	11.7	9.0	5.2	9.5
Hispanic	1.4	1.4	0.7	1.0	1.6	0.9	1.5	1.9	2.0	1.1	1.6	1.5
Black	1.3	0.9	0.6	1.0	1.0	0.3	0.6	0.7	1.8	1.2	2.0	2.5
Asian	7.9	7.9	8.1	7.6	9.0	4.8	18.3	6.6	7.7	6.6	1.4	5.4
American Indian	0.1	0.1	0.2	0.1	0.1	0.1		0.2	0.1	0.1	0.1	0.2
Other			0.1					0.1		0.1		0.1
No Report	1.3	1.8	0.9	1.7	1.2	0.9	1.2	1.2	1.5	1.3	1.3	1.5
Citizenship												
U.S.	94.3	93.9	89.0	92.2	94.8	94.0	88.8	95.0	94.9	96.0	98.5	94.7
Native	84.3	82.2	81.2	81.1	82.4	85.9	72.1	88.5	85.2	87.3	93.8	86.3
Naturalized	9.6	11.5	7.8	11.0	11.9	8.0	16.3	6.4	9.2	8.2	4.2	7.6
Unspecified	0.4	0.1		0.2	0.5	0.1	0.4	0.1	0.5	0.5	0.5	0.8
Non-U.S.	5.7	6.1	11.0	7.8	5.2	5.9	11.2	5.0	5.1	3.9	1.4	5.3
Immigrant	4.7	4.4	9.1	6.2	4.6	5.1	9.8	3.5	4.6	3.0	1.0	4.1
Non-Immigrant	0.7	1.0	1.5	1.1	0.4	0.6	1.0	1.4	0.4	0.5	0.3	0.9
No Report										0.1	0.1	0.1

Demographic Characteristics	All Fields	Field of Doctorate								
		Hist	Art Hist	Music	Speech/ Theater	Phil	Eng/ Amer Lang & Lit	Class Lang & Lit	Modern Lang & Lit	Other Humn
Total Population (N)	85,200	20,400	2,400	5,900	3,700	6,500	22,800	1,900	15,100	6,500
	%	%	%	%	%	%	%	%	%	%
Sex										
Male	71.5	83.4	51.2	79.1	77.5	85.4	66.2	70.7	58.4	67.3
Female	28.5	16.6	48.8	20.9	22.5	14.6	33.8	29.3	41.6	32.7
Racial/Ethnic Group										
White	91.5	91.9	94.2	92.7	93.4	93.3	95.1	95.5	84.0	88.8
Minority Group	6.2	5.2	4.0	5.0	3.1	5.0	3.4	1.5	13.4	9.0
Hispanic	2.9	1.7	1.1	0.9	0.1	1.6	1.1	0.5	10.2	1.5
Black	1.6	1.8	0.9	2.3	2.2	0.6	1.5	0.9	1.2	2.6
Asian	1.6	1.6	1.9	1.5	0.4	2.5	0.7	0.1	1.9	4.8
American Indian	0.1	0.1	0.2	0.3	0.5	0.3	0.1		0.2	
Other/No Report	2.3	2.9	1.8	2.3	3.5	1.7	1.5	3.0	2.6	2.3
Citizenship										
U.S.	96.9	98.3	94.3	98.6	97.7	97.1	98.8	97.8	92.4	95.2
Native	88.9	91.6	87.3	94.7	93.7	90.0	95.9	91.2	71.7	86.2
Naturalized	7.1	5.5	6.1	3.2	3.0	6.2	2.5	5.6	19.3	7.4
Unspecified	1.0	1.2	0.8	0.6	1.1	0.9	0.4	1.0	1.4	1.6
Non-U.S.#	3.0	1.6	5.5	1.4	1.8	2.9	1.1	2.2	7.6	4.8
No Report	0.1	0.1	0.2		0.5				0.1	

#In view of the lack of a comprehensive sampling frame for foreign-earned Ph.D.s in the United States, the number of humanities Ph.D.s who are foreign citizens may be somewhat underestimated.

SOURCE: Science, Engineering and Humanities Doctorates in the U.S., 1983 Profile, National Research Council, 1984

TABLE 4-13

DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX AND EMPLOYMENT STATUS, 1983

FIELD OF Ph.D.	TOTAL			LABOR FORCE			LABOR FORCE PARTICIPATION RATES			UNEMPLOYMENT RATES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
All Fields	387,300	334,600	52,700	365,400	317,000	48,400	94.3	94.7	91.8	1.0	0.8	2.6
Math	19,600	17,900	1,700	18,700	17,100	1,600	95.4	95.5	94.1	0.6	0.6	0.4
Computer Sciences	2,600	2,400	200	2,500	2,300	200	96.1	95.8	100.0			
Physics/Astronomy	30,300	29,300	1,000	29,100	28,200	900	96.0	96.2	90.0	0.7	0.7	1.7
Chemistry	50,000	46,100	3,900	46,600	43,000	3,600	93.2	93.3	92.3	1.2	1.1	2.7
Earth/Environ. Sci.	12,900	12,100	800	12,300	11,600	700	95.3	95.9	87.5	0.8	0.6	3.8
Engineering	57,500	56,800	700	55,600	55,000	700	96.7	96.8	100.0	0.5	0.5	2.0
Agriculture Sciences	18,900	18,000	900	17,400	16,600	700	92.1	92.2	77.8	0.8	0.7	4.5
Medical Sciences	14,700	11,400	3,300	13,800	10,700	3,100	93.9	93.9	93.9	0.8	0.7	1.2
Biological Sciences	69,500	55,600	13,900	64,000	51,700	12,400	92.1	93.0	89.2	1.5	1.0	3.6
Psychology	51,300	36,000	15,300	48,800	34,500	14,300	95.1	95.8	93.5	1.1	0.9	1.5
Social Sciences	60,000	49,000	11,000	56,500	46,400	10,200	94.2	94.7	92.7	1.2	0.6	3.6

SOURCE: SMC estimates for 1958-71 based on data by Adolph Wilburn. Current estimates by SMC based on Degree Data from the National Research Council.

TABLE 4-14

ESTIMATED PROPORTIONS OF BLACKS AMONG U.S. DOCTORATES AWARDED 1958-82

FIELD	Total	% of Total	Black	% of Black	Blacks as % of Total
Physical Sci. & Mathematics	95,161	17.0	888	6.2	0.93
Engineering	48,848	8.7	253	1.8	0.52
Life Sciences	86,841	15.5	1,256	8.8	1.45
Social Sciences	109,044	19.4	2,575	18.0	2.36
Arts & Humanities	79,132	14.1	1,330	9.3	1.68
Education	117,849	21.0	7,370	51.6	6.25
Professional Fields	24,113	4.3	623	4.4	2.58
TOTAL, ALL FIELDS	560,643	100.0	14,295	100.0	2.55

Note: In years after 1971, only U.S. Citizens and Permanent Visa residents have been counted. Earlier years include total doctorates awarded.

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1981, National Science Foundation 82-332

TABLE 4-15

EMPLOYED DOCTORATES BY FIELD, EMPLOYMENT SECTOR AND SEX, 1981

FIELD	Total Employed			Business and Industry			Educational Institutions			Hospitals and Clinics			Non-Profit Organizations			Fed. Govt. & Military/Comm. Corps			State and Other Government		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
TOTAL ALL FIELDS	**343,538**	**40,942**	**11.9**	**99,020**	**7,220**	**7.3**	**186,809**	**25,789**	**13.8**	**9,862**	**2,213**	**22.4**	**12,581**	**2,118**	**16.8**	**27,139**	**2,093**	**7.7**	**6,522**	**1,350**	**20.7**
Physical Scientists	**63,189**	**3,770**	**6.0**	**27,401**	**1,113**	**4.1**	**28,333**	**2,062**	**7.3**	**518**	**74**	**14.3**	**2,071**	**190**	**9.2**	**4,479**	**240**	**5.4**	**358**	**86**	**24.0**
Chemists	41,971	3,160	7.5	22,250	981	4.4	15,772	1,701	10.8	405	70	17.3	1,033	149	14.4	2,196	172	7.8	303	82	27.1
Physicists/Astronomers	21,218	610	2.9	5,151	132	2.6	12,561	361	2.9	113	4	3.5	1,038	41	3.9	2,283	68	3.0	55	4	7.3
Math Scientists	**15,594**	**1,315**	**8.4**	**1,621**	**134**	**8.3**	**12,739**	**1,078**	**8.5**	*	*	–	**263**	**45**	**17.1**	**909**	**54**	**5.9**	**2**	**2**	**100.0**
Mathematicians	13,038	1,039	8.0	1,159	82	7.1	11,007	899	8.2	*	*	–	224	34	15.2	610	22	3.6	2	2	100.0
Statisticians	2,556	276	10.8	462	52	11.3	1,732	179	10.3	*	*	–	39	11	28.2	299	32	10.7	–	–	–
Computer Specialists	**9,048**	**701**	**7.7**	**5,212**	**417**	**8.0**	**3,010**	**252**	**8.4**	**20**	*	–	**276**	**4**	**1.4**	**378**	**12**	**3.2**	**152**	**16**	**10.5**
Environmental Scientists	**16,029**	**863**	**5.4**	**4,788**	**236**	**4.9**	**6,772**	**382**	**5.6**	*	*	–	**623**	**49**	**7.9**	**3,184**	**148**	**4.6**	**616**	**37**	**6.0**
Earth Scientists	12,121	578	4.8	4,213	211	5.0	5,019	215	4.3	*	*	–	309	23	7.4	2,083	99	4.8	196	28	14.3
Oceanographers	1,782	203	11.4	184	9	4.9	964	120	12.4	*	*	–	86	20	23.3	396	41	10.4	137	4	2.9
Atmospheric Scientists	2,126	82	3.9	391	16	4.1	789	47	6.0	*	*	–	228	6	2.6	705	8	1.1	13	5	38.5
Engineers	**56,953**	**759**	**1.3**	**31,659**	**422**	**1.3**	**18,083**	**223**	**1.2**	**18**	**11**	**61.1**	**2,338**	**46**	**2.0**	**4,309**	**49**	**1.1**	**357**	**6**	**1.7**
Life Scientists	**86,715**	**13,244**	**15.3**	**13,473**	**1,301**	**9.7**	**56,787**	**9,521**	**16.8**	**2,974**	**476**	**16.0**	**3,165**	**691**	**21.8**	**8,354**	**882**	**10.6**	**1,643**	**315**	**19.2**
Biological Scientists	49,673	9,032	18.2	5,330	743	13.9	35,840	6,842	19.1	1,181	190	16.1	2,272	537	23.6	4,356	545	12.5	569	139	24.4
Agricultural Scientists	15,879	436	2.7	3,450	105	3.3	9,147	265	2.9	3	*	–	284	7	2.5	2,444	53	2.2	432	6	1.4
Medical Scientists	21,163	3,776	17.8	4,693	453	9.7	11,800	2,414	20.5	1,790	286	16.0	609	147	24.1	1,554	284	18.3	642	160	24.9
Psychologists	**43,064**	**11,860**	**27.5**	**10,145**	**2,996**	**29.5**	**21,833**	**5,998**	**27.5**	**6,194**	**1,558**	**25.2**	**1,693**	**526**	**31.1**	**1,432**	**189**	**13.2**	**1,715**	**579**	**33.8**
Social Scientists	**52,946**	**8,430**	**15.9**	**4,721**	**601**	**12.7**	**39,252**	**6,273**	**16.0**	**138**	**94**	**68.1**	**2,152**	**567**	**26.3**	**4,094**	**519**	**12.7**	**1,679**	**309**	**18.4**
Economists	13,426	1,131	8.4	2,161	176	8.1	9,017	668	7.4	*	*	–	331	108	32.6	1,258	136	10.8	136	13	9.6
Sociologists/Anthrop.	10,998	2,934	26.7	487	84	17.2	9,285	2,459	26.5	96	69	71.9	534	158	29.6	310	82	26.5	221	57	25.8

* No cases reported.

SOURCE: Characteristics of Doctoral Scientists and Engineers, 1981, National Science Foundation, NSF 82-332

TABLE 4-16

MINORITY DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, RACE AND EMPLOYMENT SECTOR, 1981

	BUSINESS & INDUSTRY			EDUCATIONAL INST.			GOVERNMENT**			OTHER			TOTAL		
FIELD	Black	Indian	Asian	Black	Indian	Asian	Bl.	Ind.	Asian	Bl.	Ind.	Asian	Black	Indian	Asian
ALL FIELDS	**613**	**586**	**11,763**	**2,892**	**1,204**	**12,030**	**349**	**216**	**1,634**	**424**	**197**	**1,411**	**4,609**	**2,325**	**27,857**
Physical Scientists	**208**	**65**	**2,847**	**347**	**173**	**2,101**	**35**	**45**	**495**	**24**	**13**	**254**	**644**	**296**	**5,838**
Chemists	126	63	2,328	204	112	968	29	26	304	15	0	174	380	201	3,898
Phys/Astron.	82	2	519	143	61	1,133	6	19	147	9	13	80	264	95	1,940
Math Scientists	**6**	*	**118**	**147**	**55**	**998**	**9**	**17**	**39**	**30**	**2**	**28**	**200**	**74**	**1,221**
Mathematicians	6	*	59	140	37	812	7	15	7	16	2	28	177	54	937
Statisticians	*	*	59	7	18	186	2	2	32	14	*	*	23	20	284
Computer Specialists	**14**	**5**	**603**	**3**	**9**	**250**	**3**	**3**	**28**	**0**	**0**	**5**	**20**	**17**	**886**
Engineers	**118**	**230**	**6,421**	**92**	**119**	**1,769**	**16**	**15**	**423**	**15**	**29**	**270**	**270**	**437**	**9,055**
Environmental Sci.	**8**	**7**	**247**	**17**	**14**	**310**	**14**	**35**	**69**	**2**	*	**105**	**41**	**56**	**749**
Earth Scientists	8	7	169	13	7	209	9	33	51	2	*	88	32	47	535
Oceanographers	*	*	25	2	7	55	5	*	5	*	*	17	7	7	102
Atmospheric Sci.	*	*	53	2	*	46	*	2	13	*	*	*	2	2	112
Life Scientists	**65**	**119**	**1,094**	**783**	**318**	**4,070**	**120**	**44**	**337**	**114**	**38**	**540**	**1,185**	**551**	**6,416**
Biological Sci.	32	70	592	429	187	2,715	79	19	246	64	28	271	663	335	4,025
Agricultural Sci.	8	15	205	134	65	451	10	23	26	15	10	*	209	113	771
Medical Sci.	25	34	297	220	66	904	31	2	65	35	*	269	313	103	1,620
Psychologists	**112**	**154**	**88**	**523**	**179**	**334**	**49**	**37**	**79**	**132**	**105**	**78**	**853**	**475**	**609**
Social Scientists	**82**	**6**	**345**	**980**	**337**	**2,198**	**103**	**8**	**164**	**107**	**10**	**131**	**1,396**	**419**	**3,083**
Economists	39	*	229	145	219	698	10	*	81	10	5	92	234	242	1,165
Sociol/Anthrop.	7	1	11	246	64	319	2	*	19	50	*	*	343	65	427
Other Social Sci.	36	5	105	589	54	1,181	91	8	64	47	5	39	819	112	1,491

* No reported cases. ** Includes Federal, State and Local Government.

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1981, National Science Foundation, NSF 82-332

TABLE 4-17

EMPLOYED DOCTORATES BY FIELD, WORK ACTIVITY AND SEX, 1981

FIELD	Total Employed			Research & Development			Management or Administration			Teaching			Consulting			Sales/Professional Services			Other		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
TOTAL ALL FIELDS	343,538	40,942	11.9	120,108	12,290	10.2	60,312	5,001	8.3	104,956	13,919	13.3	12,035	1,072	8.9	25,724	5,817	22.6	16,441	2,253	13.7
Physical Scientists	**63,189**	**3,770**	**6.0**	**29,681**	**1,764**	**5.9**	**11,892**	**465**	**3.9**	**15,609**	**1,149**	**7.4**	**1,128**	**16**	**1.4**	**1,446**	**88**	**6.1**	**2,865**	**231**	**8.1**
Chemists	41,971	3,160	7.5	18,548	1,414	7.6	8,985	408	4.5	9,661	1,006	10.4	876	9	1.0	1,181	76	6.4	2,329	198	8.5
Physicists/Astron.	21,218	610	2.9	11,133	350	3.1	2,907	57	2.0	5,948	143	2.4	252	7	2.8	265	12	4.5	536	33	6.2
Math Scientists	**15,594**	**1,315**	**8.4**	**3,390**	**227**	**6.7**	**1,316**	**69**	**5.2**	**9,602**	**905**	**9.4**	**458**	**58**	**12.7**	**301**	**14**	**4.7**	**383**	**29**	**7.6**
Mathematicians	13,038	1,039	8.0	2,731	158	5.8	1,147	55	4.8	8,277	753	9.1	161	31	19.3	223	7	3.1	378	24	6.3
Statisticians	2,556	276	10.8	659	69	10.5	169	14	8.3	1,325	152	11.5	297	27	9.1	78	7	9.0	5	5	100.0
Computer Specialists	**9,048**	**701**	**7.7**	**4,512**	**372**	**8.2**	**1,693**	**52**	**3.1**	**1,546**	**131**	**8.5**	**554**	**42**	**7.6**	**217**	**30**	**13.8**	**424**	**70**	**16.5**
Environmental Sci.	**16,029**	**863**	**5.4**	**6,321**	**373**	**5.9**	**3,624**	**146**	**4.0**	**3,617**	**171**	**4.7**	**1,045**	**55**	**5.3**	**395**	**16**	**4.1**	**882**	**94**	**10.7**
Earth Scientists	12,121	578	4.8	4,076	177	4.3	2,719	100	3.7	3,101	146	4.7	927	48	6.2	373	15	4.0	805	87	10.8
Oceanographers	1,782	203	11.4	1,028	136	13.2	445	35	7.9	182	18	9.9	53	7	13.2	20	1	5.0	36	3	8.3
Atmospheric Sci.	2,126	82	3.9	1,217	60	4.9	460	11	2.4	334	7	2.1	65	*	-	2	*	-	41	4	9.8
Engineers	**56,953**	**759**	**1.3**	**23,380**	**379**	**1.6**	**15,193**	**103**	**0.7**	**10,744**	**115**	**1.1**	**3,818**	**62**	**1.6**	**1,366**	**16**	**1.2**	**2,282**	**83**	**3.6**
Life Scientists	**86,715**	**13,244**	**15.3**	**39,888**	**6,576**	**16.5**	**12,457**	**1,347**	**10.8**	**21,990**	**3,618**	**16.5**	**1,623**	**170**	**10.5**	**5,297**	**652**	**12.3**	**4,225**	**720**	**17.0**
Biological Sci.	49,673	9,032	18.2	25,647	4,940	19.3	5,036	630	12.5	15,217	2,713	17.8	751	104	13.8	948	188	19.8	1,450	343	23.7
Agricultural Sci.	15,879	436	2.7	6,732	198	2.9	3,348	35	1.0	2,997	92	3.1	407	10	2.5	715	3	0.4	1,342	91	6.8
Medical Scientists	21,163	3,776	17.8	7,509	1,438	19.2	4,073	682	16.7	3,776	813	21.5	465	56	12.0	3,634	461	12.7	1,433	286	20.0
Psychologists	**43,064**	**11,860**	**27.5**	**5,383**	**1,202**	**22.3**	**5,853**	**1,500**	**25.6**	**12,563**	**3,265**	**26.0**	**2,051**	**473**	**23.1**	**15,168**	**4,732**	**31.2**	**1,512**	**522**	**34.5**
Social Scientists	**52,946**	**8,430**	**15.9**	**7,553**	**1,397**	**18.5**	**8,284**	**1,319**	**15.9**	**29,285**	**4,565**	**15.6**	**1,358**	**196**	**14.4**	**1,534**	**269**	**17.5**	**3,868**	**504**	**13.0**
Economists	13,426	1,131	8.4	2,972	291	9.8	1,815	143	7.9	6,769	498	7.4	815	62	7.6	283	8	2.8	787	74	9.4
Sociol./Anthrop.	10,998	2,934	26.7	1,821	599	32.9	1,288	244	18.9	6,859	1,812	26.4	18	14	77.8	255	103	40.1	480	106	22.1
Other Social Sci.	28,522	8,430	29.6	2,760	507	18.4	5,181	932	18.0	15,657	2,255	14.4	725	120	16.6	996	158	15.9	2,601	324	12.5

* No cases reported.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, NSF 84-300, January 1984

TABLE 4-18

EMPLOYED U.S. SCIENTISTS AND ENGINEERS BY FIELD, SEX AND RACE, 1982

FIELD	SEX	TOTAL		WHITE		BLACK		ASIAN		NATIVE AMER.	
		No. in 1982	% Women	No in 1982	% Women	No in 1982	% Women	No. in 1982	% Women	No. in 1982	% Women
ALL FIELDS	**Total**	**3,328,500**		**3,040,000**	**91.33**	**86,400**	**2.60**	**149,900**	**4.50**	**13,500**	**0.41**
	Women	**437,100**	**13.13**	**372,900**	**85.31**	**29,600**	**6.77**	**26,200**	**5.99**	**1,700**	**0.39**
PHYSICAL SCIENTISTS	**Total**	**225,100**		**207,400**	**92.14**	**5,700**	**2.53**	**9,200**	**4.09**	**500**	**0.22**
	Women	**26,300**	**11.68**	**21,300**	**80.99**	**2,900**	**11.03**	**2,000**	**7.60**	*	-
Chemists	Total	154,200		140,300	90.99	5,100	3.31	7,300	4.73	400	0.26
	Women	21,700	14.07	16,800	77.42	2,900	13.36	1,800	8.29	*	-
Physicists/ Astronomers	Total	45,800		43,300	94.54	500	1.09	1,300	2.84	100	0.22
	Women	2,500	5.46	2,400	96.00	100	4.00	100	4.00	*	-
Other Physical Scientists	Total	25,100		23,800	94.82	200	0.80	600	2.39	*	-
	Women	2,100	8.37	2,100	100.00	*	-	*	-	*	-
MATHEMATICAL SCIENTISTS	**Total**	**44,600**		**33,900**	**76.01**	**2,700**	**6.05**	**6,900**	**15.47**	*	-
	Women	**20,400**	**45.74**	**12,200**	**59.80**	**2,100**	**10.29**	**5,300**	**25.98**	*	-
Mathematicians	Total	29,100		22,600	77.66	1,600	5.50	4,000	13.75	*	-
	Women	11,600	39.86	7,100	61.21	1,100	9.48	2,700	23.28	*	-
Statisticians	Total	15,500		11,300	72.90	1,100	7.10	2,900	18.71	*	-
	Women	8,800	56.77	5,100	57.95	1,000	11.36	2,600	29.55	*	-
Computer Specialists	Total	382,200		353,600	92.52	9,500	2.49	14,200	3.72	1,200	0.31
	Women	104,100	27.24	92,300	88.66	5,100	4.90	5,500	5.28	200	0.19
ENVIRONMENTAL SCIENTISTS	**Total**	**85,700**		**79,700**	**93.00**	**500**	**0.58**	**3,600**	**4.20**	**700**	**0.82**
	Women	**120,400**	**12.14**	**10,200**	**98.08**	**100**	**0.96**	**100**	**0.96**	*	-
Earth Scientists	Total	72,400		67,600	93.37	400	0.55	2,800	3.87	500	0.69
	Women	9,200	12.71	9,000	97.83	*	-	*	-	*	-
Oceanographers	Total	3,300		2,900	87.88	*	-	100	3.03	200	6.06
	Women	400	12.12	400	100.00	*	-	*	-	*	-
Atmospheric Scientists	Total	10,000		9,200	92.00	*	-	*	-	*	-
	Women	800	8.00	700	87.50	*	-	*	-	*	-
LIFE SCIENTISTS	**Total**	**350,900**		**331,000**	**94.33**	**8,100**	**2.31**	**6,000**	**2.28**	**1,100**	**0.31**
	Women	**77,300**	**22.03**	**72,200**	**93.40**	**1,500**	**1.94**	**2,100**	**2.72**	**400**	**0.52**
Biological Scientists	Total	246,400		231,700	94.03	6,400	2.60	5,500	2.23	600	0.24
	Women	58,000	23.54	53,800	92.76	1,200	2.07	,,700	2.93	400	0.69
Agricultural Scientists	Total	75,700		71,900	94.98	1,300	1.72	1,600	2.11	400	0.53
	Women	12,500	16.51	11,900	95.20	200	1.60	400	3.20	*	-
Medical Scientists	Total	28,900		27,400	94.81	300	1.04	800	2.77	*	-
	Women	6,800	23.53	6,500	95.59	100	1.47	100	1.47	*	-
PSYCHOLOGISTS	**Total**	**144,200**		**135,800**	**94.17**	**4,800**	**3.33**	**1,400**	**0.97**	**900**	**0.62**
	Women	**59,000**	**40.92**	**54,800**	**92.88**	**2,500**	**4.24**	**900**	**1.53**	**300**	**0.51**
SOCIAL SCIENTISTS	**Total**	**256,000**		**223,400**	**87.27**	**14,900**	**5.82**	**11,400**	**4.45**	**1,200**	**0.47**
	Women	**75,200**	**29.38**	**60,900**	**80.98**	**7,800**	**10.37**	**4,400**	**5.85**	**400**	**0.53**
Economists	Total	112,100		98,200	87.60	4,500	4.01	7,400	6.60	700	0.62
	Women	20,900	18.64	15,800	75.60	2,400	11.48	2,500	11.96	200	0.96
Sociologists/ Anthropologists	Total	61,000		52,500	86.07	5,200	8.52	1,500	2.46	400	0.66
	Women	27,000	44.26	23,000	85.19	2,600	9.63	1,000	3.70	100	0.37
Other Social Scientists	Total	82,900		72,700	87.70	5,200	6.27	2,600	3.14	100	0.12
	Women	27,200	32.81	22,100	81.25	2,800	10.29	900	3.31	100	0.37
ENGINEERS	**Total**	**1,839,600**		**1,675,300**	**91.07**	**40,200**	**2.19**	**95,100**	**5.17**	**7,900**	**0.43**
	Women	**64,500**	**3.51**	**48,900**	**75.81**	**7,600**	**11.78**	**5,900**	**9.15**	**400**	**0.62**

* Too few cases to report. NOTE: Detail may not add due to rounding.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-19

1982 RATES OF LABOR FORCE PARTICIPATION, UNEMPLOYMENT, S/E EMPLOYMENT, UNDER-EMPLOYMENT AND UNDER-UTILIZATION BY FIELD, SEX AND RACIAL/ETHNIC GROUP

	WHITE		BLACK		ASIAN		NAT.-AMERICAN		HISPANIC		TOTAL	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
TOTAL SCIENTISTS/ENGINEERS												
Participation[1]	95.0	92.8	97.7	97.3	96.8	93.9	95.8	98.4	96.8	92.6	95.2	93.1
Unemployment[2]	1.9	4.0	3.8	5.9	3.1	4.0	0.9	3.4	1.8	5.8	2.0	4.3
S/E Employment[3]	88.2	79.9	85.4	78.8	90.8	86.8	81.6	85.3	84.1	79.6	88.2	80.2
Under-employment[4]	1.3	5.4	1.9	5.7	1.3	4.4	2.4	15.3	2.8	6.8	1.4	5.4
Under-utilization[5]	3.2	9.2	5.7	11.3	4.4	8.2	3.3	18.1	4.6	12.2	3.3	9.4
PHYSICAL SCIENTISTS												
Participation	93.6	89.6	90.3	95.9	93.7	92.5	*	*	88.7	*	93.4	90.4
Unemployment	2.3	4.1	4.7	7.7	2.9	12.6	*	*	6.8	*	2.4	5.2
S/E Employment	92.3	92.4	82.9	88.9	84.6	91.2	*	*	82.5	*	91.8	92.0
Under-employment	1.0	1.9	*	*	*	1.1	*	*	3.6	*	1.0	1.6
Under-utilization	3.3	5.9	4.7	7.7	2.9	13.6	*	*	10.2	*	3.4	6.7
MATH SCIENTISTS												
Participation	93.9	91.2	*	96.2	93.0	90.6	*	*	*	*	93.9	91.9
Unemployment	2.1	3.4	*	6.5	1.9	0.6	*	*	*	*	2.0	2.9
S/E Employment	92.4	90.3	*	91.5	88.6	90.7	*	*	*	*	92.0	88.0
Under-employment	2.3	3.1	*	4.2	21.6	9.7	*	*	*	*	3.6	5.0
Under-utilization	4.4	6.3	*	10.5	23.1	10.2	*	*	*	*	5.5	7.7
COMPUTER SPECIALISTS												
Participation	98.9	94.3	99.5	97.1	99.4	97.8	*	*	100.0	93.0	98.9	94.5
Unemployment	1.0	1.2	0.8	0.9	1.6	2.4	*	*	*	*	1.1	1.3
S/E Employment	70.6	72.1	70.7	68.6	91.0	72.2	*	*	72.9	83.1	70.9	72.0
Under-employment	2.2	1.7	1.6	5.2	3.0	2.5	*	*	*	*	3.2	3.2
Under-utilization	3.2	2.9	2.3	6.1	4.5	4.9	*	*	*	*	3.2	3.2
ENVIRONMENTAL SCIENTISTS												
Participation	94.5	90.9	*	*	96.0	*	*	*	*	*	94.6	91.1
Unemployment	3.1	2.6	*	*	2.0	1.8	*	*	*	*	3.0	2.6
S/E Employment	94.1	93.2	*	*	97.8	*	*	*	*	*	94.2	93.2
Under-employment	1.2	4.8	*	*	2.1	*	*	*	*	*	1.3	4.8
Under-utilization	3.8	10.8	*	*	3.8	*	*	*	*	*	3.8	10.7
LIFE SCIENTISTS												
Participation	95.3	92.3	96.4	96.4	93.9	97.2	*	*	93.3	94.3	95.3	92.6
Unemployment	1.8	5.1	1.2	4.9	2.0	2.6	*	*	2.7	7.7	1.7	5.1
S/E Employment	88.4	86.9	92.1	88.4	84.2	80.0	*	*	76.3	83.8	88.4	86.4
Under-employment	2.9	6.7	1.8	5.4	4.4	13.0	*	*	5.7	14.4	2.9	7.2
Under-utilization	4.6	11.4	3.0	10.1	6.3	15.3	*	*	8.2	21.0	4.6	11.9
PSYCHOLOGISTS												
Participation	96.8	93.6	98.0	99.4	*	*	*	*	*	100.0	96.6	93.8
Unemployment	2.5	3.7	12.4	1.1	*	*	*	*	*	0.6	2.8	3.6
S/E Employment	79.3	71.5	55.1	54.6	*	*	*	*	*	61.8	78.4	70.8
Under-employment	3.4	8.8	7.0	14.9	*	*	*	*	*	9.8	4.0	9.1
Under-utilization	5.7	12.2	18.5	15.8	*	*	*	*	*	10.4	6.7	12.3
SOCIAL SCIENTISTS												
Participation	95.0	91.9	98.5	99.2	94.2	96.3	*	*	98.4	90.2	95.1	93.1
Unemployment	3.0	7.1	4.3	8.6	9.6	3.6	*	*	1.5	11.2	3.3	7.5
S/E Employment	68.4	71.6	65.7	73.5	73.5	92.3	*	*	61.6	73.3	68.4	73.3
Under-employment	4.8	11.6	6.6	10.3	2.0	3.7	*	*	6.2	9.1	4.8	10.7
Under-utilization	7.7	17.9	10.6	18.0	11.4	7.1	*	*	7.6	19.3	8.0	17.4
ENGINEERS												
Participation	94.5	93.7	98.4	95.9	97.5	91.9	96.4	*	97.9	91.1	94.8	93.7
Unemployment	1.8	3.8	4.0	7.1	2.9	5.9	0.5	*	1.7	6.2	1.9	4.4
S/E Employment	92.7	93.4	92.7	89.6	93.7	96.9	86.1	*	90.4	93.5	92.7	93.3
Under-employment	0.6	1.0	0.8	0.9	0.6	0.2	*	*	1.7	2.3	0.6	1.0
Under-utilization	2.3	4.8	4.8	7.9	3.5	6.1	0.5	*	3.3	8.4	2.4	5.4

[1] Ratio of those employed plus unemployed but seeking, to the total population.
[2] Ratio of those employed but seeking to total labor force.
[3] Ratio of those holding jobs in science or engineering to total employed graduates in S/E.
[4] Ratio of those working part time but seeking full time or those in non-S/E job who prefer S/E to total employment.
[5] Proportion of the labor force that is total of unemployed but seeking plus working part time but seeking full time, plus those involuntarily in non-S/E employment.

* Too few cases to estimate

SOURCE: National Science Foundation, Unpublished Data, 1984

TABLE 4-20

SCIENTISTS AND ENGINEERS BY FIELD, SEX AND EMPLOYMENT STATUS, 1982

FIELD	TOTAL			LABOR FORCE			UNEMPLOYED/SEEKING		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
All Fields	3,388,000	3,098,800	489,700	3,405,700	2,949,100	456,600	77,200	57,700	19,500
Physical Scientists	248,700	218,000	30,700	231,400	203,600	27,800	6,300	4,900	1,400
Mathematical Scientists	49,200	26,300	22,900	45,700	24,700	21,000	1,100	500	600
Computer Specialists	395,800	284,200	111,600	386,600	281,100	105,500	4,300	3,000	1,300
Environmental Scientists	93,900	81,800	12,100	88,400	77,300	11,100	2,700	2,000	700
Engineers	1,980,500	1,908,600	71,900	1,876,400	1,809,000	67,400	36,800	33,900	3,000
Life Scientists	380,200	292,300	87,900	359,900	278,500	81,400	9,000	4,900	4,100
Psychologists	156,000	90,800	65,200	148,900	87,700	61,100	4,600	2,400	2,200
Social Scientists	284,100	196,800	87,300	268,300	187,100	81,300	12,300	6,200	6,100

Note: Detail may not add to totals because of rounding.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-21

SCIENTISTS AND ENGINEERS BY FIELD, SEX, AND SELECTED EMPLOYMENT STATUS, 1982

Field	*Total population*			*Total employed*			*S/E employed*		
	Total	*Men*	*Women*	*Total*	*Men*	*Women*	*Total*	*Men*	*Women*
Total S/E	3,588,000	3,098,800	489,700	3,328,500	2,891,300	437,100	2,901,800	2,551,000	350,800
Total scientists	1,608,000	1,190,200	417,800	1,488,900	1,116,200	372,700	1,196,100	905,400	290,700
Physical scientists	248,700	218,000	30,700	225,100	198,800	26,300	206,700	182,500	24,200
Chemists	171,600	146,200	25,400	154,200	132,600	21,700	140,900	121,000	19,900
Physicists/astronomers	49,700	46,800	2,900	45,800	43,200	2,500	42,900	40,600	2,300
Other physical scientists	27,400	25,000	2,400	25,100	22,900	2,100	22,900	20,900	1,900
Mathematical scientists	49,200	26,300	22,900	44,600	24,200	20,400	40,400	22,300	18,100
Mathematicians	32,100	19,100	13,000	29,100	17,500	11,600	26,500	16,200	10,300
Statisticians	17,100	7,300	9,900	15,500	6,700	8,800	13,900	6,100	7,800
Computer specialists	395,800	284,200	111,600	382,200	278,100	104,100	272,300	197,300	75,000
Environmental scientists	93,900	81,800	12,100	85,700	75,400	10,400	80,700	71,000	9,700
Earth scientists	79,000	68,300	10,700	72,400	63,200	9,200	68,200	59,600	8,600
Oceanographers	3,900	3,300	600	3,300	2,900	400	2,900	2,600	400
Atmospheric scientists	11,000	10,200	900	10,000	9,200	800	9,600	8,900	700
Life scientists	380,200	292,300	87,900	350,900	273,600	77,300	308,600	241,800	66,800
Biological scientists	268,200	201,500	66,700	246,400	188,400	58,000	219,500	169,100	50,500
Agricultural scientists	82,200	68,100	14,100	75,700	63,100	12,500	64,000	53,100	10,900
Medical scientists	29,800	22,700	7,100	28,900	22,100	6,800	25,100	19,700	5,400
Psychologists	156,000	90,800	65,200	144,200	85,300	59,000	108,600	66,800	41,700
Social scientists	284,100	196,800	87,300	256,000	180,800	75,200	178,800	123,700	55,100
Economists	123,200	99,000	24,200	112,100	91,100	20,900	81,100	64,400	16,700
Sociologists/ anthropologists	67,300	36,700	30,600	61,000	34,000	27,000	40,300	23,100	17,200
Other social scientists	93,600	61,100	32,500	82,900	55,700	27,200	57,400	36,200	21,200
Engineers	1,980,500	1,908,600	71,900	1,839,600	1,775,100	64,500	1,705,700	1,645,600	60,100

Note: Detail may not add to totals because of rounding. These are preliminary data, subject to revision.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-22

SCIENTISTS AND ENGINEERS BY FIELD, RACE AND SELECTED EMPLOYMENT STATUS, 1982

Field	Total[1]	White	Black	Asian	Native American	Total[1]	White	Black	Asian	Native American	Total[1]	White	Black	Asian	Native American
	Total population					Total employed					S/E employed				
Total S/E	3,588,500	3,278,200	92,800	160,900	14,200	3,328,500	3,040,000	86,400	149,900	13,500	2,901,800	2,650,800	71,800	135,000	11,100
Total scientists	1,608,000	1,472,400	49,700	59,800	6,000	1,188,900	1,364,700	46,200	54,800	5,700	1,196,100	1,097,900	34,800	45,600	4,300
Physical scientists	248,700	228,400	6,500	10,400	600	225,100	207,400	5,700	9,200	500	206,700	191,600	4,900	8,000	500
Chemists	171,600	155,500	5,800	8,400	500	154,200	140,300	5,100	7,300	400	140,900	129,000	4,500	6,100	400
Physicists/astronomers	49,700	46,800	500	1,400	100	45,800	43,300	500	1,300	100	42,900	40,700	300	1,300	100
Other physical scientists	27,400	26,100	200	600	(2)	25,100	23,800	200	600	(2)	22,900	21,800	200	600	(2)
Mathematical scientists	49,200	37,400	3,000	7,600	(2)	44,600	33,900	2,700	6,900	(2)	40,400	31,000	2,500	6,200	(2)
Mathematicians	32,100	25,100	1,900	4,200	(2)	29,100	22,600	1,600	4,000	(2)	26,500	20,700	1,500	3,600	(2)
Statisticians	17,100	12,400	1,100	3,500	(2)	15,500	11,300	1,100	2,900	(2)	13,900	10,300	1,000	2,600	(2)
Computer specialists	395,800	366,100	9,700	14,700	1,200	382,200	353,600	9,500	14,200	1,200	272,300	250,900	6,600	11,000	800
Environmental scientists	93,900	87,400	600	3,800	700	85,700	79,700	500	3,600	700	80,700	74,900	400	3,500	700
Earth scientists	79,000	73,900	500	2,900	500	72,400	67,600	400	2,800	500	68,200	63,600	300	2,800	500
Oceanographers	3,900	3,400	100	100	200	3,300	2,900	(2)	100	200	2,900	2,600	(2)	100	200
Atmospheric scientists	11,000	10,100	(2)	800	(2)	10,000	9,200	(2)	700	(2)	9,600	8,700	(2)	700	(2)
Life scientists	380,200	358,700	8,500	8,600	1,200	350,900	331,000	8,100	8,000	1,100	308,600	291,500	7,400	6,600	800
Biological scientists	268,200	252,400	6,800	6,000	600	246,400	231,700	6,400	5,500	600	219,500	206,400	5,900	5,100	400
Agricultural scientists	82,200	78,000	1,400	1,700	600	75,700	71,900	1,300	1,600	400	64,000	61,300	1,200	900	300
Medical scientists	29,800	28,400	300	800	(2)	28,900	27,400	300	800	(2)	25,100	23,800	300	700	(2)
Psychologists	156,000	146,600	5,200	1,700	1,000	144,200	135,800	4,800	1,400	900	108,600	103,400	2,600	1,000	500
Social scientists	284,100	247,700	16,200	13,000	1,200	256,000	223,400	14,900	11,400	1,200	178,800	154,700	10,400	9,200	1,000
Economists	123,200	107,900	4,700	8,300	700	112,100	98,200	4,500	7,400	700	81,100	69,000	3,900	6,400	600
Sociologists/ anthropologists	67,300	57,700	5,500	1,600	400	61,000	52,500	5,200	1,500	400	40,300	35,500	2,500	1,200	200
Other social scientists	93,600	82,200	5,900	3,100	100	82,900	72,700	5,200	2,600	100	57,400	50,200	4,000	1,600	100
Engineers	1,980,500	1,805,800	43,000	101,100	8,300	1,839,600	1,675,300	40,200	95,100	7,900	1,705,700	1,553,000	37,000	89,300	6,800

[1]Includes racial categories listed as well as Other and No report.

[2]Too few cases to estimate.

Note: Details may not add to totals because of rounding. These are preliminary data, subject to revision.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-23

WOMEN SCIENTISTS AND ENGINEERS BY FIELD, RACE AND SELECTED EMPLOYMENT STATUS, 1982

Field	Total[1]	White	Black	Asian	Native American	Total[1]	White	Black	Asian	Native American	Total[1]	White	Black	Asian	Native American
	Total population					Total employed					S/E employed				
Total S/E	489,700	418,600	32,300	29,000	1,800	437,100	372,900	29,600	26,200	1,700	350,800	298,000	23,300	22,700	1,500
Total scientists	417,800	364,300	23,800	22,200	1,300	372,700	323,900	22,000	20,300	1,300	290,700	252,300	16,500	17,000	1,100
Physical scientists	30,700	24,800	3,300	2,400	(2)	26,300	21,300	2,900	2,000	(2)	24,200	19,700	2,600	1,800	(2)
Chemists	25,400	19,800	3,200	2,300	(2)	21,700	16,800	2,900	1,800	(2)	19,900	15,600	2,500	1,700	(2)
Physicists/astronomers	2,900	2,700	100	100	(2)	2,500	2,400	100	100	(2)	2,300	2,200	100	100	(2)
Other physical scientists	2,400	2,300	100	(2)	(2)	2,100	2,100	(2)	(2)	(2)	1,900	1,900	(2)	(2)	(2)
Mathematical scientists	22,900	13,800	2,300	5,900	(2)	20,400	12,200	2,100	5,300	(2)	18,100	11,000	1,900	4,800	(2)
Mathematicians	13,000	8,200	1,300	2,800	(2)	11,600	7,100	1,100	2,700	(2)	10,300	6,400	1,000	2,500	(2)
Statisticians	9,900	5,600	1,000	3,100	(2)	8,800	5,100	1,000	2,600	(2)	7,800	4,600	900	2,300	(2)
Computer specialists	111,600	99,100	5,300	5,700	200	104,100	92,300	5,100	5,500	200	75,000	66,500	3,500	3,900	200
Environmental scientists	12,100	11,900	100	100	(2)	10,400	10,200	100	100	(2)	9,700	9,500	100	100	(2)
Earth scientists	10,700	10,500	(2)	100	(2)	9,200	9,000	(2)	(2)	(2)	8,600	8,500	(2)	(2)	(2)
Oceanographers	600	600	(2)	(2)	(2)	400	400	(2)	(2)	(2)	400	400	(2)	(2)	(2)
Atmospheric scientists	900	800	(2)	(2)	(2)	800	700	(2)	(2)	(2)	700	600	(2)	(2)	(2)
Life scientists	87,900	82,400	1,700	2,300	400	77,300	72,200	1,500	2,100	400	66,800	62,800	1,300	1,700	200
Biological scientists	66,700	62,200	1,300	1,800	400	58,000	53,800	1,200	1,700	400	50,500	47,100	1,100	1,400	200
Agricultural scientists	14,100	13,400	200	400	(2)	12,500	11,900	200	400	(2)	10,900	10,400	200	200	(2)
Medical scientists	7,100	6,800	100	100	(2)	6,800	6,500	100	100	(2)	5,400	5,200	100	100	(2)
Psychologists	65,200	60,900	2,600	1,000	300	59,000	54,800	2,500	900	300	41,700	39,200	1,400	600	300
Social scientists	87,300	71,400	8,600	4,800	400	75,200	60,900	7,800	4,400	400	55,100	43,600	5,700	4,100	400
Economists	24,200	18,400	2,600	2,800	200	20,900	15,800	2,400	2,500	200	16,700	11,800	2,200	2,500	200
Sociologists/ anthropologists	30,600	26,100	2,700	1,000	100	27,000	23,000	2,600	1,000	100	17,200	14,900	1,300	700	100
Other social scientists	32,500	26,900	3,300	900	100	27,200	22,100	2,800	900	100	21,200	16,900	2,300	800	100
Engineers	71,900	54,200	8,500	6,800	500	64,500	48,900	7,600	5,900	400	60,100	45,700	6,800	5,700	400

[1] Includes racial categories listed as well as Other and No report.
[2] Too few cases to estimate.

Note: Detail may not add to totals because of rounding. These are preliminary data, subject to revision.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-24

HISPANIC SCIENTISTS AND ENGINEERS BY FIELD, SEX, AND SELECTED EMPLOYMENT STATUS, 1982

Field	Total population			Total employed			S/E employed		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Total S/E	79,100	65,900	13,200	74,200	62,600	11,500	61,800	52,700	9,200
Total scientists	33,700	22,800	10,900	30,700	21,200	9,500	22,500	15,200	7,300
Physical scientists	4,600	3,600	1,000	3,800	3,000	800	3,200	2,500	700
Chemists	2,900	2,000	900	2,400	1,700	700	2,100	1,500	600
Physicists/astronomers	1,200	1,100	100	900	800	(1)	700	700	(1)
Other physical scientists	500	500	(1)	500	400	(1)	400	300	(1)
Mathematical scientists	1,200	500	700	1,200	400	700	900	400	500
Mathematicians	900	400	500	900	300	500	600	300	300
Statisticians	300	100	200	300	100	200	300	100	200
Computer specialists	6,000	4,400	1,700	5,900	4,400	1,500	4,500	3,200	1,300
Environmental scientists	1,600	1,400	200	1,500	1,400	200	1,400	1,200	200
Earth scientists	1,400	1,300	100	1,400	1,200	100	1,200	1,100	100
Oceanographers	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Atmospheric scientists	200	200	(1)	100	100	(1)	100	100	(1)
Life scientists	7,500	5,200	2,300	6,700	4,700	2,000	5,300	3,600	1,700
Biological scientists	5,100	3,200	1,900	4,500	2,900	1,600	3,800	2,400	1,300
Agricultural scientists	1,800	1,500	300	1,500	1,300	300	1,100	800	300
Medical scientists	700	500	200	700	500	200	400	300	100
Psychologists	2,900	1,400	1,500	2,700	1,200	1,500	1,500	600	900
Social scientists	9,700	6,300	3,400	8,900	6,100	2,800	5,800	3,800	2,000
Economists	3,000	2,300	700	2,600	2,200	500	2,100	1,600	500
Sociologists/ anthropologists	3,400	2,100	1,300	3,100	2,000	1,100	1,500	1,000	500
Other social scientists	3,400	1,900	1,500	3,200	1,900	1,200	2,200	1,200	1,000
Engineers	45,500	43,100	2,300	43,500	41,500	2,000	39,400	37,500	1,900

[1]Too few cases to estimate.

Note: Detail may not add to totals because of rounding. These are preliminary data, subject to revision.

SOURCE: Women and Minorities in Science, National Science Foundation, January 1984

TABLE 4-25

EMPLOYED SCIENTISTS AND ENGINEERS BY SEX, RACE, ETHNICITY AND YEARS OF PROFESSIONAL EXPERIENCE, 1982

	YEARS OF EXPERIENCE												
	Total+	< 1	(H) %	1-4	(H) %	5-9	(H) %	10-14	(H) %	15-24	(H) %	25 or more	(H) %
Total Scientists & Engineers	3,328,500	225,800	6.8	512,600	15.4	573,900	17.3	531,000	16.0	737,600	22.2	729,000	22.0
Women	437,100	32,100	7.3	131,000	30.0	112,500	25.7	76,800	17.6	57,000	13.0	26,400	6.0
Black	86,400	7,600	8.8	13,600	15.7	20,000	23.1	16,400	19.0	17,200	19.9	11,500	13.3
Asian	149,900	10,000	6.7	22,500	15.0	32,400	21.6	29,400	19.6	39,000	26.0	16,500	11.0
Native American	13,500	900	6.7	2,100	15.6	1,600	11.9	1,800	13.3	4,000	29.6	3,100	23.0
Hispanic†	74,200	5,600	7.5	16,000	21.6	14,000	18.9	12,900	17.4	15,400	20.8	9,900	13.3
Physical Scientists	225,100	12,000	5.3	29,600	13.1	34,000	15.1	33,600	14.9	58,200	25.9	56,300	25.0
Women	26,300	1,400	5.3	7,300	27.8	5,500	20.9	4,000	15.2	4,500	17.1	3,500	13.3
Black	5,700	500	8.8	800	14.0	1,200	21.0	1,000	17.5	1,000	17.5	1,200	21.0
Asian	9,200	500	5.4	1,100	12.0	1,700	18.5	2,200	23.9	2,400	26.1	1,300	14.1
Native American	500	*	-	100	20.0	*	-	*	-	200	40.0	200	40.0
Hispanic†	3,800	400	10.5	600	15.8	700	18.4	1,000	26.3	700	18.4	400	10.5
Math Scientists	44,600	2,200	4.9	5,000	11.2	9,800	22.0	8,400	18.8	12,700	28.5	6,500	14.6
Women	20,400	800	3.9	2,900	14.2	5,300	26.0	4,000	19.6	5,500	27.0	2,000	9.8
Black	2,700	300	11.1	100	3.7	600	22.2	300	11.1	900	33.3	400	14.8
Asian	6,900	200	3.0	1,200	17.4	1,700	24.6	700	10.1	2,300	33.3	700	10.1
Native American	*	*	-	*	-	*	-	*	-	*	-	*	-
Hispanic†	1,200	*	-	200	16.7	200	16.7	200	16.7	500	41.7	*	-
Computer Scientists	382,200	19,100	5.0	66,900	17.5	95,100	24.9	86,500	22.6	84,400	22.1	29,600	7.7
Women	104,100	4,100	3.9	24,400	23.4	31,600	30.4	25,800	24.8	15,500	14.9	2,800	2.7
Black	9,500	900	9.5	1,300	13.7	2,900	30.5	1,700	17.9	1,900	20.0	600	6.3
Asian	14,200	1,100	7.7	3,600	25.4	4,700	33.1	3,100	21.8	1,600	11.3	200	1.4
Native American	1,200	*	-	100	8.3	300	25.0	200	16.7	500	41.7	100	8.3
Hispanic†	5,900	400	6.8	1,400	23.7	1,200	20.3	1,000	16.9	1,600	27.1	300	5.1
Environmental Scientists	85,700	5,400	6.3	18,800	21.9	18,200	21.2	10,100	11.8	12,600	14.7	20,000	23.3
Women	10,400	900	8.7	4,500	43.3	2,900	27.9	800	7.7	1,300	12.5	400	3.8
Black	500	*	-	100	20.0	200	40.0	100	20.0	*	-	100	20.0
Asian	3,600	200	5.6	400	11.1	1,100	30.6	500	13.9	700	19.4	700	19.4
Native American	700	*	-	200	28.6	100	14.3	*	-	100	14.3	300	42.8
Hispanic†	1,500	100	6.7	500	33.3	300	20.0	100	6.7	300	20.0	300	20.0
Life Scientists	350,900	23,500	6.7	71,200	20.3	74,600	21.3	56,300	16.0	63,300	18.0	60,100	17.1
Women	77,300	6,500	8.4	25,900	33.5	19,700	25.5	16,100	20.8	8,500	11.0	5,900	7.6
Black	8,100	700	8.6	1,000	12.3	1,300	16.0	1,500	18.5	2,100	25.9	1,500	18.5
Asian	8,000	600	7.5	1,200	15.0	1,300	16.3	1,600	20.0	2,600	32.5	500	6.3
Native American	1,100	100	9.1	100	9.1	200	18.2	100	9.1	400	36.4	200	18.2
Hispanic†	6,700	300	4.5	2,000	29.9	1,400	21.9	1,000	14.9	1,200	17.9	700	10.4

SOURCE: Women and Minorities in Science, National Science Foundation, January 1984

TABLE 4-25 (continued)

EMPLOYED SCIENTISTS AND ENGINEERS BY SEX, RACE, ETHNICITY AND YEARS OF PROFESSIONAL EXPERIENCE, 1982

	YEARS OF EXPERIENCE												
	Total+	< 1	(H) %	1-4	(H) %	5-9	(H) %	10-14	(H) %	15-24	(H) %	25 or more	(H) %
Psychologists	**144,200**	**15,600**	**10.8**	**24,600**	**17.1**	**29,900**	**20.7**	**26,300**	**18.2**	**28,000**	**19.4**	**18,800**	**13.0**
Women	59,000	7,100	12.0	14,500	24.6	13,300	22.5	10,000	16.9	9,300	15.8	4,200	7.1
Black	4,800	700	14.6	1,100	22.9	900	18.7	700	14.6	700	14.6	700	14.6
Asian	1,400	100	7.1	500	35.7	100	7.1	400	28.6	100	7.1	100	7.1
Native American	900	100	11.1	400	44.4	100	11.1	100	11.1	100	11.1	100	11.1
Hispanic†	2,700	300	11.1	1,200	44.4	400	14.8	700	25.9	100	3.7	*	-
Social Scientists	**256,000**	**23,600**	**9.2**	**55,700**	**21.8**	**49,500**	**19.3**	**45,700**	**17.9**	**46,000**	**18.0**	**33,100**	**12.9**
Women	75,200	7,500	10.0	22,400	29.8	18,500	24.6	13,900	18.5	8,500	11.3	4,100	5.5
Black	14,900	800	5.4	3,000	20.1	2,700	18.1	3,900	26.2	2,800	18.8	1,700	11.4
Asian	11,400	1,200	10.5	1,700	14.9	3,600	31.6	1,900	16.7	2,200	19.3	900	7.9
Native American	1,200	100	8.3	200	16.7	200	16.7	100	8.3	400	33.3	200	16.7
Hispanic†	8,900	1,000	11.2	2,500	28.1	1,800	20.2	1,500	16.9	1,600	18.0	500	5.6
Engineers	**1,839,600**	**124,500**	**6.8**	**240,700**	**13.1**	**262,900**	**14.3**	**263,900**	**14.3**	**432,300**	**23.5**	**504,100**	**27.4**
Women	64,500	3,900	6.0	29,100	45.1	15,800	24.5	7,700	11.9	4,600	7.1	3,200	5.0
Black	40,200	3,600	9.0	6,200	15.4	10,100	25.1	7,200	17.9	7,900	19.7	5,100	12.7
Asian	95,100	6,100	6.4	12,800	13.5	18,200	19.1	18,900	19.9	26,900	28.3	12,000	12.6
Native American	7,900	600	7.6	900	11.4	800	10.1	1,400	17.7	2,100	26.6	2,000	25.3
Hispanic†	43,500	3,200	7.4	7,400	17.0	8,100	18.6	7,500	17.2	9,300	21.4	7,700	17.7

+ Includes categories listed as well as No Report.

† Also included in racial categories.

* Too few cases to estimate.

NOTE: Detail may not add to totals because of rounding. These preliminary data are subject to revision.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-26

EMPLOYED SCIENTISTS AND ENGINEERS BY FIELD, SEX, RACE, ETHNICITY AND TYPE OF EMPLOYER, 1982

	TOTAL EMPLOYED				BUSINESS & INDUSTRY			EDUCATIONAL INST.			FEDERAL GOVERNMENT			OTHER		
	TOTAL	WOMEN	% W	% M	TOTAL	WOMEN	%	TOTAL	WOMEN	%	TOTAL	WOMEN	%	TOTAL	WOMEN	%
Total Scientists/Engineers	3,328,500	437,100	13.1	0.0	2,063,600	209,900	62.0	389,700	96,700	11.7	285,000	36,900	8.6	590,300	93,700	17.7
White	3,040,000	372,900	12.3	91.3	1,893,400	177,500	62.3	355,100	86,500	11.7	255,300	29,500	8.4	536,200	79,300	17.6
Black	86,400	29,600	34.3	2.6	45,500	14,500	52.7	10,800	4,500	12.5	14,300	4,700	16.6	15,900	5,900	18.4
Asian	149,900	26,200	17.5	4.5	95,100	13,700	63.4	17,100	4,300	11.4	10,700	1,800	7.1	26,800	6,400	17.9
Native American	13,500	1,700	12.6	0.4	7,200	800	53.3	1,500	300	11.1	1,000	*	7.4	3,800	500	28.1
Hispanic	74,200	11,500	15.5	2.3	42,600	5,100	57.4	7,700	2,100	10.4	6,000	1,200	8.1	17,700	3,100	23.9
Physical Scientists	225,100	26,300	11.7		129,100	14,800	57.4	46,900	5,500	20.8	22,500	2,100	10.0	26,700	4,000	11.9
White	207,400	21,300	10.3	92.1	118,900	11,400	57.3	44,000	5,100	21.2	20,800	1,700	10.0	23,800	3,100	11.5
Black	5,700	2,900	50.9	2.5	3,100	1,800	54.4	700	100	12.3	700	300	12.3	1,200	700	21.1
Asian	9,200	2,000	21.7	4.1	5,600	1,500	60.9	1,600	200	17.4	600	100	6.5	1,500	100	16.3
Native American	500	*		0.2	300	*		100	*		100	*		*	*	
Hispanic	3,800	800	21.1	1.7	2,000	600	52.6	800	100	7.9	300	*	18.4	700	*	8.3
Mathematical Scientists	44,600	20,400	45.8		8,800	4,700	19.7	26,200	9,800	58.7	4,500	2,500	10.1	5,200	3,400	11.7
White	33,900	12,200	36.0	76.0	6,300	2,400	18.6	21,400	6,900	63.1	3,400	1,600	10.0	2,900	1,300	8.6
Black	2,700	2,100	77.8	6.1	300	200	11.1	1,500	1,000	55.6	700	700	25.9	200	200	7.4
Asian	6,900	5,300	76.8	15.5	1,900	1,700	27.5	2,800	1,600	40.6	300	200	4.4	1,800	1,800	26.1
Native American	*	*			*	*		*	*		*	*		*	*	
Hispanic	1,200	700	58.4	2.7	100	100	41.7	500	300	41.7	*	*		500	400	
Computer Scientists	382,200	104,100	27.2		285,900	75,700	74.8	20,100	6,000	5.3	27,600	9,200	7.2	48,800	13,300	12.8
White	353,600	92,300	26.1	92.5	266,200	67,700	75.3	18,100	5,500	5.1	24,200	7,100	6.8	45,100	11,900	12.6
Black	9,500	5,100	53.7	2.5	6,200	3,300	65.3	500	300	5.3	2,000	1,300	21.1	600	200	6.3
Asian	14,200	5,500	38.7	3.7	10,200	3,800	71.8	900	100	6.3	800	600	5.6	2,400	900	16.9
Native American	1,200	200	16.7	0.3	600	200	50.0	200	*	16.7	200	*	16.7	100	*	8.3
Hispanic	5,900	1,500	25.4	1.5	4,300	1,000	72.9	100	*	1.7	400	400	6.8	1,200	100	20.3
Environmental Scientists	85,700	10,400	12.1		44,600	5,600	52.0	10,400	1,400	12.1	13,800	1,800	16.1	16,800	1,500	19.6
White	79,700	10,200	12.8	93.0	41,100	5,500	51.6	9,500	1,400	11.9	12,700	1,800	15.9	16,400	1,500	20.6
Black	500	100	20.0	0.6	200	*	40.0	*	*		300	*	60.0	*	*	
Asian	3,600	100	2.8	4.2	2,300	100	63.9	600	*	16.7	600	*	16.7	200	*	5.6
Native American	700	*		0.8	400	*		100	*		100	*		200	*	
Hispanic	1,500	200	13.3	1.8	800	100	53.3	100	*	6.7	200	*	13.3	400	100	26.7

* Too few cases to estimate.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-26 (continued)

EMPLOYED SCIENTISTS AND ENGINEERS BY FIELD, SEX, RACE, ETHNICITY AND TYPE OF EMPLOYER, 1982 (continued)

	TOTAL EMPLOYED				BUSINESS & INDUSTRY			EDUCATIONAL INST.			FEDERAL GOVERNMENT			OTHER		
	TOTAL	WOMEN	% W	% M	TOTAL	WOMEN	%	TOTAL	WOMEN	%	TOTAL	WOMEN	%	TOTAL	WOMEN	%
Life Scientists	350,900	77,300	22.0		96,500	22,200	27.5	113,600	29,600	32.3	58,700	9,200	16.7	82,200	16,300	23.4
White	331,000	72,200	21.8	94.3	92,700	20,800	28.0	107,100	27,800	32.4	53,900	8,800	16.3	77,200	15,000	23.3
Black	8,100	1,500	18.5	2.3	900	300	11.1	1,900	500	23.5	3,400	300	42.0	1,800	500	22.2
Asian	8,000	2,100	26.3	2.3	2,100	700	26.3	3,100	800	38.8	800	100	10.0	2,000	600	25.0
Native American	1,100	400	36.4	0.3	200	100	18.2	400	100	36.4	100	*	9.1	400	100	36.4
Hispanic	6,700	2,000	29.9	1.9	2,000	600	29.9	2,100	800	31.3	800	*	11.9	1,800	900	26.9
Psychologists	144,200	59,000	40.9		26,100	11,300	18.1	52,900	21,800	36.7	3,300	1,100	2.3	62,000	24,800	43.0
White	135,800	54,800	40.4	94.2	24,000	10,200	17.7	50,000	20,200	36.8	3,100	1,000	2.3	58,700	23,400	31.3
Black	4,800	2,500	52.1	3.3	1,500	800	31.3	1,800	1,000	37.5	100	*	2.1	1,500	600	31.3
Asian	1,400	900	64.3	1.0	200	100	14.3	500	400	35.7	*	*		500	200	35.7
Native American	900	300	33.3	0.6	200	*	22.2	100	100	11.1	*	*		700	200	77.8
Hispanic	2,700	1,500	55.6	1.9	700	400	25.9	800	500	29.6	100	*	3.7	1,100	500	40.7
Social Scientists	256,000	75,200	29.4		88,800	23,800	34.7	69,400	20,000	27.1	24,500	7,000	9.6	73,300	24,300	28.6
White	223,400	60,900	27.3	87.3	79,700	20,100	35.7	61,900	17,800	27.7	20,600	4,800	9.2	61,300	18,200	27.4
Black	14,900	7,800	52.3	5.8	4,100	2,000	27.5	3,100	1,100	20.8	2,400	1,600	16.1	5,300	3,100	35.6
Asian	11,400	4,400	38.6	4.5	2,900	1,100	25.4	3,100	800	27.2	1,000	400	8.8	4,300	2,200	37.7
Native American	1,200	400	33.3	0.5	200	100	16.7	300	100	25.0	*	*		800	200	66.7
Hispanic	8,900	2,800	31.5	3.5	2,400	800	27.0	2,000	500	22.5	900	400	10.1	3,400	1,200	38.2
Engineers	1,839,600	64,500	3.5		1,383,800	51,700	75.2	50,300	2,700	2.7	130,200	3,900	7.1	275,300	6,000	15.0
White	1,675,300	48,900	2.9	91.1	1,264,600	39,400	75.5	43,200	1,900	2.6	116,600	2,800	7.0	250,900	4,800	15.0
Black	40,200	7,600	18.9	2.2	29,200	6,000	72.6	1,300	500	3.2	4,600	600	11.4	5,100	500	12.7
Asian	95,100	5,900	6.2	5.2	70,000	4,600	73.6	4,400	300	4.6	6,500	500	6.8	14,200	600	14.9
Native American	7,900	400	5.1	0.4	5,300	400	67.1	300	*	3.8	500	*	6.3	1,800	*	22.8
Hispanic	43,500	2,000	4.6	2.4	30,200	1,400	69.4	1,300	*	2.9	3,200	300	7.4	8,800	200	20.2

* Too few cases to estimate.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-27

SCIENTIST-ENGINEERS BY FIELD, RACE, ETHNIC ORIGIN, SEX AND WORK ACTIVITY

	TOTAL EMPLOYED				RESEARCH & DEVELOPMENT			MANAGEMENT (R&D & OTHER)			TEACHING			OTHER		
	TOTAL	WOMEN	% W	% M	TOTAL	WOMEN	%	TOTAL	WOMEN	%	TOTAL	WOMEN	%	TOTAL	WOMEN	%
Total Scientists/Engineers	3,328,500	437,100	13.1	0.0	1,005,200	112,700	30.2	834,800	64,800	25.1	217,800	55,800	6.5	1,270,700	203,800	38.2
White	3,040,000	372,900	12.3	91.3	908,100	95,000	29.9	775,700	54,800	25.5	198,400	49,100	6.5	1,157,900	174,000	38.1
Black	86,400	29,600	34.3	2.6	20,800	5,900	24.1	19,900	5,400	23.0	7,200	3,100	8.3	38,500	15,200	44.6
Asian	149,900	26,200	17.5	4.5	61,000	9,500	33.9	26,300	2,900	14.6	8,900	2,700	4.9	53,600	11,000	29.8
Native American	13,500	1,700	12.6	0.4	3,000	300	22.2	4,200	400	31.1	900	300	6.7	5,500	800	40.7
Hispanic	74,200	11,500	15.5	2.3	22,100	3,200	29.8	16,800	3,300	22.6	4,300	1,500	5.8	31,000	5,100	41.8
Physical Scientists	225,100	26,300	11.7		97,100	11,900	43.1	53,600	2,700	23.8	27,100	3,200	12.0	47,300	8,500	21.0
White	207,400	21,300	10.3	92.1	89,300	9,500	43.1	50,200	2,300	24.2	25,900	3,100	12.5	42,200	6,500	20.3
Black	5,700	2,900	50.9	2.5	2,000	1,300	35.1	1,000	300	17.5	300	100	5.3	2,500	1,300	43.9
Asian	9,200	2,000	21.7	4.1	4,600	1,000	50.0	1,900	100	20.7	700	*	3.6	2,100	800	22.8
Native American	500	*		0.2	300	*	60.0	100	*	20.0	100	*	20.0	*	*	
Hispanic	3,800	800	21.1	1.7	1,400	500	36.8	*	*	00.0	500	100	13.2	900	100	50.0
Mathematical Scientists	44,600	20,400	45.8		7,400	3,100	16.6	3,800	1,700	8.5	21,700	8,400	48.7	11,800	7,200	26.5
White	33,900	12,200	36.0	76.0	5,600	1,700	16.5	2,600	600	7.4	17,900	5,900	52.8	7,800	4,000	23.0
Black	2,700	2,100	77.8	6.1	200	200	7.4	200	200	7.4	1,200	900	44.4	1,000	800	37.0
Asian	6,900	5,300	76.8	15.5	1,500	1,200	21.7	700	700	10.1	2,200	1,300	31.9	2,400	2,100	34.8
Native American	*	*			*	*		*	*		*	*		*	*	
Hispanic	1,200	700	58.4	2.7	100	*	8.3	*	*		500	*	41.7	700	500	58.3
Computer Scientists	382,200	104,100	27.2		70,000	19,500	18.3	54,400	10,100	14.2	8,900	3,500	2.3	248,900	71,100	65.1
White	353,600	92,300	26.1	92.5	62,600	16,700	17.7	51,400	9,000	14.5	8,100	3,300	2.3	231,500	63,200	65.5
Black	9,500	5,100	53.7	2.5	1,400	600	14.7	800	400	8.4	300	100	3.2	6,900	4,100	72.6
Asian	14,200	5,500	38.7	3.7	4,800	1,800	33.8	1,500	600	10.6	200	100	1.4	7,700	3,000	54.2
Native American	1,200	200	16.7	0.3	200	*	16.7	200	*	16.7	200	*	16.7	500	200	41.6
Hispanic	5,900	1,500	25.4	1.5	1,200	400	20.3	900	400	15.3	100	100	1.7	3,700	800	62.7
Environmental Scientists	85,700	10,400	12.1		36,600	6,000	42.7	18,300	1,000	21.4	5,000	800	5.8	25,800	2,500	30.1
White	79,700	10,200	12.8	93.0	34,300	5,900	43.0	16,600	1,000	20.8	4,800	800	6.0	23,900	2,400	30.0
Black	500	100	20.0	0.6	200	*	40.0	100	*	20.0	*	*		200	*	40.0
Asian	3,600	100	2.8	4.2	1,500	100	41.7	800	*	22.2	100	*	2.8	1,300	*	36.1
Native American	700	*		0.8	200	*	28.6	400	*	57.1	*	*		*	*	
Hispanic	1,500	200	13.3	1.8	700	100	46.7	300	*	20.0	100	*	6.7	500	*	33.3

*Too few cases to estimate.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-27 (continued)

SCIENTIST-ENGINEERS BY FIELD, RACE, ETHNIC ORIGIN, SEX AND WORK ACTIVITY

	TOTAL EMPLOYED				RESEARCH & DEVELOPMENT			MANAGEMENT (R&D & Other)			TEACHING			OTHER		
	TOTAL	WOMEN	% W	% M	TOTAL	WOMEN	%	TOTAL	WOMEN	%	TOTAL	WOMEN	%	TOTAL	WOMEN	%
Life Scientists	350,900	77,300	22.0		120,100	32,700	34.2	90,800	11,200	25.9	47,500	12,100	13.5	92,500	21,400	26.4
White	331,000	72,200	21.8	94.3	112,300	30,800	33.9	86,900	10,200	26.3	44,700	11,600	13.5	87,100	19,700	26.3
Black	8,100	1,500	18.5	2.3	2,900	700	35.8	1,700	*	21.0	1,200	200	14.8	2,200	500	27.2
Asian	8,000	2,100	26.3	2.3	3,500	800	43.8	1,100	500	13.8	1,100	200	13.8	2,200	700	27.5
Native American	1,100	400	36.4	0.3	300	*	27.3	600	300	54.5	100	*	9.1	100	*	9.1
Hispanic	6,700	2,000	29.9	1.9	2,800	1,000	41.8	1,000	300	14.9	800	300	11.9	2,200	400	32.8
Psychologists	144,200	59,000	40.9		10,900	4,500	7.6	29,600	10,300	20.5	28,000	10,500	19.4	75,700	33,800	52.5
White	135,800	54,800	40.4	94.2	10,200	4,100	7.5	28,000	9,800	20.6	26,800	9,400	19.7	71,100	31,400	52.4
Black	4,800	2,500	52.1	3.3	200	200	4.2	1,300	400	27.1	700	400	14.6	2,600	1,500	54.2
Asian	1,400	900	64.3	1.0	200	200	14.3	100	*	7.1	400	400	28.6	600	300	42.9
Native American	900	300	33.3	0.6	*	*		100	*	11.1	200	200	22.2	700	100	77.8
Hispanic	2,700	1,500	55.6	1.9	200	100	7.4	300	200	11.1	400	300	14.8	1,700	1,000	63.0
Social Scientists	256,000	75,200	29.4		36,500	11,300	14.3	80,800	19,100	31.6	49,500	15,200	19.3	89,200	29,500	34.8
White	223,400	60,900	27.3	87.3	31,000	8,600	13.9	70,900	15,100	31.7	44,000	13,400	19.7	77,400	23,800	34.6
Black	14,900	7,800	52.3	5.8	1,300	900	8.7	5,800	2,800	39.9	2,500	1,100	16.8	5,400	3,000	36.2
Asian	11,400	4,400	38.6	4.5	3,300	1,600	28.9	1,500	400	13.2	2,300	600	20.2	4,400	1,900	38.6
Native American	1,200	400	33.3	0.5	100	*	8.3	600	100	50.0	300	100	25.0	400	200	33.3
Hispanic	8,900	2,800	31.5	3.5	900	400	10.1	3,100	700	34.8	1,300	400	14.6	3,500	1,300	39.3
Engineers	1,839,600	64,500	3.5		626,700	23,700	34.1	503,500	8,800	27.4	30,100	2,200	1.6	679,500	29,900	36.9
White	1,675,300	48,900	2.9	91.1	562,800	17,700	33.6	469,000	6,700	28.0	26,500	1,700	1.6	616,900	22,800	36.8
Black	40,200	7,600	18.9	2.2	12,500	2,000	31.1	8,800	1,300	21.9	1,000	300	2.5	17,800	4,000	44.3
Asian	95,100	5,900	6.2	5.2	41,600	2,900	43.7	18,600	600	19.6	1,900	200	2.0	33,000	2,300	34.7
Native American	7,900	400	5.1	0.4	2,000	200	25.3	2,100	*	26.6	100	*	1.3	3,600	300	45.6
Hispanic	43,500	2,000	4.6	2.4	14,800	800	34.0	10,200	200	23.4	600	*	1.4	17,800	1,100	40.9

*Too few cases to estimate.

SOURCE: U.S. Scientists and Engineers, 1980, National Science Foundation, NSF 82-314

TABLE 4-28

SCIENTISTS AND ENGINEERS BY FIELD, HIGHEST DEGREE, SEX AND RACE, 1980

FIELD AND HIGHEST DEGREE			RACE			
	Total	Women	White	Black	Asian	Other
ALL FIELDS	**3,110,700**	**408,100**	**2,959,700**	**59,500**	**81,000**	**10,500**
Doctorate	348,400	39,800	329,100	3,300	14,000	2,000
Master's	763,600	112,400	716,400	15,200	29,900	2,100
Bachelor's	194,600	255,200	1,863,600	40,700	36,200	6,100
CHEMISTS	170,900	29,300	160,400	4,700	5,500	200
Doctorate	43,700	3,100	40,400	200	3,100	*
Master's	20,400	5,400	19,200	600	600	*
Bachelor's	106,500	20,800	100,600	3,800	1,900	200
PHYSICISTS/ASTRONOMERS	**67,700**	**3,400**	**64,000**	**600**	**3,000**	**100**
Doctorate	21,800	700	20,000	100	1,700	*
Master's	19,400	800	18,300	200	800	*
Bachelor's	26,500	1,900	25,700	300	500	*
OTHER PHYSICAL SCIENTISTS	**23,400**	**3,300**	**22,000**	**400**	**1,000**	**100**
Doctorate	*	*	*	*	*	*
Master's	6,500	500	5,900	200	400	*
Bachelor's	16,800	2,800	16,100	200	500	*
MATHEMATICIANS	**90,600**	**16,100**	**84,500**	**4,100**	**1,800**	**100**
Doctorate	13,600	1,100	13,000	300	300	*
Master's	43,000	8,300	39,700	2,100	1,200	*
Bachelor's	33,500	6,700	31,300	1,700	300	100
STATISTICIANS	**36,400**	**9,700**	**33,300**	**900**	**2,000**	**400**
Doctorate	2,900	200	2,400	*	400	*
Master's	16,800	3,500	15,100	300	1,100	300
Bachelor's	16,600	6,000	15,600	600	400	*
COMPUTER SPECIALISTS	**354,900**	**94,800**	**333,200**	**7,600**	**13,100**	**900**
Doctorate	7,300	400	6,600	*	700	100
Master's	90,000	16,900	84,100	1,300	4,600	*
Bachelor's	257,500	77,400	242,400	6,400	7,900	800
ENVIRONMENTAL SCIENTISTS	**102,600**	**12,500**	**100,500**	**600**	**1,100**	**500**
Doctorate	15,700	600	15,200	*	300	200
Master's	27,100	3,800	26,700	100	400	*
Bachelor's	59,800	8,100	58,500	500	400	300
ENGINEERS	**1,497,100**	**34,800**	**1,432,900**	**18,900**	**40,000**	**5,300**
Doctorate	54,300	500	48,700	700	4,000	900
Master's	313,800	5,000	294,100	2,600	16,100	1,000
Bachelor's	1,086,100	29,200	1,048,600	15,500	19,100	2,900
BIOLOGISTS	**205,800**	**65,200**	**192,800**	**5,200**	**6,800**	**1,100**
Doctorate	51,700	9,800	49,000	800	1,400	500
Master's	54,800	16,900	51,000	1,960	1,800	100
Bachelor's	99,100	38,500	92,700	2,500	3,500	400
AGRICULTURAL SCIENTISTS	**154,000**	**14,400**	**150,400**	**1,600**	**1,500**	**500**
Doctorate	16,600	400	16,300	200	200	*
Master's	32,300	3,100	30,700	600	900	100
Bachelor's	105,000	10,800	103,300	800	400	500
MEDICAL SCIENTISTS	**44,900**	**10,800**	**42,300**	**700**	**1,700**	**200**
Doctorate	22,500	3,600	21,600	100	600	200
Master's	9,400	4,800	8,800	400	200	*
Bachelor's	6,300	1,900	5,200	200	900	*
PSYCHOLOGISTS	**132,600**	**52,700**	**128,100**	**3,600**	**600**	**300**
Doctorate	42,800	10,800	42,200	400	100	100
Master's	42,700	19,200	41,000	1,300	200	200
Bachelor's	47,100	22,700	44,900	1,900	300	*
ECONOMISTS	**76,400**	**12,700**	**73,800**	**900**	**1,600**	**200**
Doctorate	13,000	1,200	12,100	100	800	*
Master's	32,200	4,500	30,800	500	700	100
Bachelor's	31,000	6,900	30,600	200	100	100
SOCIOLOGISTS/ANTHROP.	**59,800**	**23,800**	**53,500**	**4,800**	**800**	**700**
Doctorate	11,400	2,900	11,100	100	300	*
Master's	22,200	9,100	20,100	1,500	600	100
Bachelor's	26,000	11,700	22,200	3,200	*	600
OTHER SOCIAL SCIENTISTS	**93,500**	**24,900**	**88,100**	**5,000**	**500**	*
Doctorate	31,100	4,500	30,600	200	300	*
Master's	33,100	10,700	31,100	1,800	200	*
Bachelor's	28,800	9,700	25,900	2,900	*	*

* Too few cases to report.
NOTE: Degree divisions will not add to totals since the "Other" degree category was deleted.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-29

LABOR FORCE/EMPLOYMENT STATUS OF RECENT SCIENCE AND ENGINEERING GRADUATES BY DEGREE LEVEL, FIELD AND SEX, 1982

Field of degree and sex	BACHELOR'S GRADUATES					MASTER'S GRADUATES				
	Total	Labor force	Total employed			Total	Labor force	Total employed		
			Total	S/E	Non-S/E			Total	S/E	Non-S/E
Total S/E	444,800	423,800	398,400	240,000	158,500	71,100	69,000	66,400	49,000	17,400
Men	283,200	274,700	260,800	176,900	83,900	51,500	50,200	49,100	38,000	11,100
Women	161,700	149,200	137,600	63,100	74,600	19,700	18,700	17,400	11,000	6,300
Total science	329,900	310,900	288,800	143,100	145,700	48,800	47,100	45,100	30,400	14,600
Men	180,100	173,300	162,200	89,800	72,400	31,300	30,400	29,600	20,900	8,700
Women	149,800	137,600	126,600	53,300	73,300	17,600	16,700	15,400	9,500	5,900
Physical science	18,300	17,400	16,400	12,400	4,000	4,000	3,800	3,600	2,300	1,300
Men	13,400	12,800	12,000	8,900	3,100	3,000	2,900	2,900	1,900	900
Women	4,900	4,600	4,300	3,500	900	900	800	800	400	400
Mathematical science	20,600	19,600	18,800	13,400	5,400	5,800	5,600	5,400	3,900	1,500
Men	12,500	11,900	11,300	8,500	2,800	3,900	3,800	3,600	2,500	1,100
Women	8,200	7,700	7,500	4,900	2,600	1,900	1,800	1,700	1,400	300
Computer science	24,700	24,400	24,000	21,800	2,200	7,900	7,800	7,800	6,700	1,100
Men	17,300	17,200	17,100	15,100	2,000	6,100	6,100	6,000	5,100	1,000
Women	7,400	7,200	6,900	6,700	300	1,800	1,800	1,700	1,600	100
Environmental science	9,800	9,200	8,500	6,800	1,600	2,500	2,400	2,300	2,000	300
Men	7,000	6,700	6,200	5,200	1,100	1,900	1,800	1,700	1,500	200
Women	2,700	2,500	2,200	1,600	600	700	600	600	500	100
Life science	81,600	75,900	70,000	41,000	29,000	11,800	11,400	11,100	8,100	3,000
Men	43,000	40,900	38,600	23,900	14,800	7,000	6,700	6,500	4,900	1,500
Women	38,600	34,900	31,300	17,100	14,200	4,900	4,700	4,600	3,200	1,500
Psychology	56,700	53,000	49,300	12,800	36,500	5,800	5,700	5,200	2,300	2,800
Men	20,300	19,800	18,000	6,100	11,900	2,500	2,500	2,500	1,200	1,200
Women	36,500	33,200	31,300	6,700	24,600	3,300	3,200	2,700	1,100	1,600
Social science	118,200	111,400	101,900	35,000	66,900	11,000	10,500	9,800	5,100	4,600
Men	66,800	64,000	58,900	22,200	36,700	6,900	6,700	6,500	3,700	2,700
Women	51,400	47,400	43,000	12,900	30,200	4,100	3,800	3,300	1,400	1,900
Engineering	114,900	112,900	109,600	96,800	12,800	22,300	21,800	21,400	18,600	2,800
Men	103,100	101,400	98,600	87,100	11,500	20,200	19,800	19,400	17,100	2,400
Women	11,900	11,600	11,000	9,700	1,300	2,100	2,000	1,900	1,500	400

Note: Detail may not add to totals because of rounding. Data include combined 1980 and 1981 graduating cohorts exclusive of full-time graduate students. These are preliminary data, subject to revision.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-30

RECENT SCIENCE AND ENGINEERING MASTER'S DEGREE RECIPIENTS BY FIELD OF DEGREE, RACE, AND LABOR FORCE/EMPLOYMENT STATUS, 1982

Field of degree and race	Total	Labor force	Total Employed		
			Total	S/E	Non-S/E
Total S/E[1]	71,100	69,000	66,400	49,000	17,400
White	63,100	61,300	59,200	43,500	15,700
Black	2,000	2,000	1,900	1,100	800
Asian	4,100	3,900	3,700	3,200	500
Native American	100	100	100	100	(2)
Total science	48,800	47,100	45,100	30,400	14,600
White	43,800	42,500	40,600	27,300	13,400
Black	1,600	1,600	1,600	800	800
Asian	2,000	1,800	1,800	1,500	200
Native American	100	100	100	100	(2)
Physical science	4,000	3,800	3,600	2,300	1,300
White	3,600	3,400	3,300	2,100	1,300
Black	100	100	100	100	(2)
Asian	100	100	100	100	(2)
Native American	(2)	(2)	(2)	(2)	(2)
Mathematical science	5,800	5,600	5,400	3,900	1,500
White	5,200	5,000	4,800	3,400	1,400
Black	200	200	200	100	(2)
Asian	400	400	400	300	(2)
Native American	(2)	(2)	(2)	(2)	(2)
Computer science	7,900	7,800	7,800	6,700	1,100
White	6,400	6,400	6,400	5,500	900
Black	100	100	100	100	(2)
Asian	900	900	900	800	100
Native American	(2)	(2)	(2)	(2)	(2)
Environmental science	2,500	2,400	2,300	2,000	300
White	2,400	2,300	2,100	1,900	300
Black	(2)	(2)	(2)	(2)	(2)
Asian	(2)	(2)	(2)	(2)	(2)
Native American	(2)	(2)	(2)	(2)	(2)
Life science	11,800	11,400	11,100	8,100	3,000
White	11,200	10,800	10,600	7,700	2,900
Black	200	200	200	100	(2)
Asian	200	200	200	100	(2)
Native American	(2)	(2)	(2)	(2)	(2)
Psychology	5,800	5,700	5,200	2,300	2,800
White	5,200	5,100	4,600	2,100	2,500
Black	300	300	300	100	200
Asian	(2)	(2)	(2)	(2)	(2)
Native American	(2)	(2)	(2)	(2)	(2)
Social science	11,000	10,500	9,800	5,100	4,600
White	9,800	9,400	8,800	4,700	4,000
Black	700	700	700	200	500
Asian	300	200	200	100	100
Native American	(2)	(2)	(2)	(2)	(2)
Engineering	22,300	21,800	21,400	18,600	2,800
White	19,200	18,800	18,600	16,200	2,400
Black	400	400	300	300	(2)
Asian	2,100	2,100	1,900	1,600	300
Native American	(2)	(2)	(2)	(2)	(2)

[1]Includes racial categories listed as well as Other and No report.
[2]Too few cases to estimate.

Note: Detail may not add to totals because of rounding. Data include combined 1980 and 1981 graduating cohorts exclusive of full-time graduate students. These are preliminary data, subject to revision.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-31

RECENT SCIENCE AND ENGINEERING BACHELOR'S DEGREE RECIPIENTS BY FIELD OF DEGREE, RACE, AND LABOR FORCE/EMPLOYMENT STATUS, 1982

Field of degree and race	Total	Labor force	Total Employed		
			Total	S/E	Non-S/E
Total S/E[1]	444,800	423,800	398,400	240,000	158,500
White	402,000	382,400	360,500	219,400	141,100
Black	16,900	16,600	14,300	6,400	7,900
Asian	10,300	9,900	9,500	6,800	2,700
Native American	1,800	1,800	1,500	1,100	400
Total science	329,900	310,900	288,800	143,100	145,700
White	296,700	278,800	259,700	130,400	129,300
Black	14,700	14,400	12,200	4,800	7,400
Asian	6,000	5,800	5,700	3,100	2,500
Native American	1,600	1,600	1,300	900	400
Physical science	18,300	17,400	16,400	12,400	4,000
White	16,900	16,000	15,200	11,800	3,400
Black	800	800	700	300	300
Asian	200	200	200	100	100
Native American	(2)	(2)	(2)	(2)	(2)
Mathematical science	20,600	19,600	18,800	13,400	5,400
White	18,600	17,700	17,000	12,100	4,800
Black	1,000	1,000	1,000	600	400
Asian	500	500	500	300	200
Native American	100	(2)	(2)	(2)	(2)
Computer science	24,700	24,400	24,000	21,800	2,200
White	22,400	22,100	21,800	19,900	1,900
Black	800	700	700	600	100
Asian	1,100	1,100	1,100	1,000	100
Native American	(2)	(2)	(2)	(2)	(2)
Environmental science	9,800	9,200	8,500	6,800	1,600
White	9,600	9,100	8,300	6,700	1,600
Black	(2)	(2)	(2)	(2)	(2)
Asian	(2)	(2)	(2)	(2)	(2)
Native American	(2)	(2)	(2)	(2)	(2)
Life science	81,600	75,900	70,000	41,000	29,000
White	75,200	69,800	64,700	38,200	26,500
Black	1,600	1,600	1,300	700	600
Asian	1,900	1,700	1,700	700	1,000
Native American	400	400	300	100	200
Psychology	56,700	53,000	49,300	12,800	36,500
White	49,600	46,400	42,900	10,400	32,500
Black	3,700	3,400	3,300	800	2,400
Asian	700	700	700	400	300
Native American	1,000	1,000	1,000	700	300
Social science	118,200	111,400	101,900	35,000	66,900
White	104,300	97,700	89,900	31,300	58,600
Black	6,800	6,800	5,300	1,800	3,500
Asian	1,700	1,600	1,600	700	900
Native American	100	100	(2)	(2)	(2)
Engineering	114,900	112,900	109,600	96,800	12,800
White	105,200	103,600	100,800	89,000	11,800
Black	2,200	2,200	2,100	1,500	500
Asian	4,200	4,100	3,800	3,700	200
Native American	200	200	200	200	(2)

[1] Includes racial categories listed as well as Other and No report.

[2] Too few cases to estimate.

Note: Detail may not add to totals because of rounding. Data include combined 1980 and 1981 graduating cohorts exclusive of full-time graduate students. These are preliminary data, subject to revision.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-32

RATES OF LABOR FORCE PARTICIPATION, UNEMPLOYMENT, S/E EMPLOYMENT, UNDEREMPLOYMENT AND UNDERUTILIZATION OF RECENT S/E GRADUATES BY DEGREE LEVEL, FIELD AND SEX, 1982

	Labor Force Participation [1]		Unemployment Rate [2]		S/E Employment Rate [3]		Underemployment Rate [4]		Underutilization Rate [5]	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
BACHELOR'S GRADS										
Total S/E	97.0	92.3	5.1	7.7	67.8	45.8	6.5	13.7	11.2	20.4
Physical Scientists	95.7	93.6	5.9	6.3	74.1	79.9	3.9	2.0	9.6	8.1
Math Scientists	95.8	94.5	5.3	2.8	75.1	65.5	6.6	7.8	10.9	10.4
Computer Scientists	99.6	96.3	0.7	3.5	89.4	96.6	1.9	1.5	2.7	4.8
Environmental Scientists	95.2	91.3	6.9	11.2	82.8	74.3	4.5	10.4	11.1	20.4
Life Scientists	95.3	90.5	5.7	10.3	61.8	54.7	11.4	13.9	16.5	22.8
Psychologists	97.5	91.1	8.9	5.8	33.7	21.4	15.2	18.4	22.7	23.1
Social Scientists	95.8	92.2	7.9	9.3	37.6	29.8	10.7	17.5	17.8	25.2
Engineers	98.4	97.5	2.7	4.7	88.3	88.1	1.8	2.0	4.5	6.6
MASTER'S GRADUATES										
Total S/E	97.7	95.2	2.3	7.3	77.4	63.5	3.4	6.8	5.7	13.6
Physical Scientists	96.1	*	1.2	*	67.2	*	7.9	*	9.0	*
Math Scientists	96.8	96.6	3.1	7.6	66.1	80.4	4.9	3.5	7.5	9.8
Computer Scientists	99.6	97.3	0.4	1.4	84.2	92.9	1.6	*	2.0	1.4
Environmental Scientists	97.3	*	6.7	*	88.8	*	2.5	*	9.0	*
Life Scientists	95.7	96.3	2.9	1.9	76.3	68.4	5.5	6.0	8.3	7.8
Psychologists	98.4	98.7	1.6	15.2	50.2	40.8	5.0	13.4	6.5	26.6
Social Scientists	97.2	91.1	3.7	12.5	58.0	42.1	8.6	12.1	11.9	23.1
Engineers	98.2	94.9	2.0	2.3	87.7	78.5	0.6	1.9	2.6	4.2

* Too few cases to estimate. NOTE: Data include combined 1980 and 1981 graduating cohorts exclusive of full-time graduate students.

1 Ratio of those employed plus unemployed but seeking, to the total population.

2 Ratio of those employed but seeking to total labor force.

3 Ratio of those holding jobs in science or engineering to total employed graduates in S/E.

4 Ratio of those working part time but seeking full time or those in non-S/E job who prefer S/E to total employment.

5 Proportion of the labor force that is total of unemployed but seeking plus working part time but seeking full time, plus those involuntarily in non-S/E employment.

SOURCE: Series of Earned Degrees Conferred, 1948-1981, National Center for Education Statistics; and Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-33

NUMBER OF BACHELOR'S DEGREES GRANTED, 1948-1981, COMPARED WITH 1982 POPULATION OF SCIENTISTS AND ENGINEERS, BY FIELD AND SEX

FIELD	BACHELOR'S DEGREES, 1948-1981				SCIENTISTS & ENGINEERS, 1982				S/E's in 1980 as a % of B.S. Degrees Granted 1948-1981	
	Total	Men	Women	% W	Total	Men	Women	% W	Men	Women
Physical/Environmental Sciences	558,357	469,523	88,834	15.9	342,600	299,800	42,800	12.5	63.8	48.2
Math/Statistical/Computer Science	545,184	358,157	187,027	34.3	445,000	310,500	134,500	30.2	86.7	71.9
Biological/Agricultural Science	1,287,186	944,653	342,533	26.6	380,200	292,300	87,900	23.1	30.9	25.7
Psychology	776,244	387,535	388,709	50.1	156,000	90,800	65,200	41.8	23.4	16.8
Social Sciences*	1,982,432	1,427,279	555,153	28.0	284,100	196,800	87,300	30.7	13.8	15.7
Engineering	1,370,534	1,339,152	52,488	3.8	1,980,500	1,908,600	71,900	3.6	142.5	137.0
Total Science & Engineering	**6,532,788**	**4,933,760**	**1,492,095**	**22.8**	**3,588,000**	**3,098,800**	**489,700**	**13.6**	**62.8**	**32.8**

*Anthropology, Sociology, Economics and Political Science

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-34

SELECTED CHARACTERISTICS OF PHYSICALLY-HANDICAPPED SCIENTISTS AND ENGINEERS, 1982

Characteristic	Total	Total Employed	Characteristic	Total	Total Employed	Characteristic	Total	Total Employed
FIELD			AGE			TYPE OF EMPLOYER		
Total S/E	85,200	66,800	Under 30	6,000	5,200	Business/industry	(1)	36,900
Total scientists	35,400	30,400	30-34	7,900	7,300	Educational institutions	(1)	7,400
Physical scientists	7,900	6,600	35-39	7,400	6,900	Hospitals/clinics	(1)	1,100
Mathematical scientists	700	500	40-44	8,500	7,800	Nonprofit organizations	(1)	1,600
Computer specialists	7,000	6,500	45-49	7,500	6,700	Federal Government	(1)	8,000
Environmental scientists	2,000	1,600	50-54	10,100	9,300	State/local government	(1)	5,000
Life scientists	7,760	7,000	55-59	16,100	14,000	Other	(1)	6,000
Psychologists	4,500	3,600	60-64	12,600	6,200	No report	(1)	700
Social scientists	5,700	4,700	65-69	5,500	2,100			
Engineers	49,800	36,400	70 & over	3,400	1,100			
			No report	200	200			
SEX			EMPLOYMENT STATUS			PRIMARY WORK ACTIVITY		
			Full-time employed	(1)	61,400	Research & development	(1)	20,100
Men	79,900	62,700	S/E occupation	(1)	56,000	Basic research	(1)	1,800
Women	5,300	4,100	Non-S/E occupation	(1)	5,500	Applied research	(1)	4,300
			Part-time employed	(1)	4,600	Development	(1)	14,000
RACE			S/E occupation	(1)	3,600	Management of R&D	(1)	5,700
			Non-S/E occupation	(1)	1,000	Other management	(1)	11,200
White	80,600	62,600	Employed, full/part status unknown	(1)	800	Teaching	(1)	5,000
Black	1,600	1,400	Unemployed/seeking	1,900	(1)	Sales/distribution	(1)	1,700
Asian	1,200	1,000	Retired/other	16,500	(1)	Production/inspection	(1)	6,700
Native American	900	900	No report	700	(1)	Other	(1)	14,500
Other/No report	900	900				No report	(1)	1,800
DOCTORAL SCIENTISTS AND ENGINEERS								
Total S/E	10,200	8,300	Under 30	100	100	Business/industry	(1)	2,100
Total scientists	8,800	7,100	30-39	1,800	1,700	Educational institutions	(1)	7,400
Physical scientists	1,800	1,400	40-44	1,300	1,300	Nonprofit organizations	(1)	200
Mathematical scientists	400	300	45-49	1,200	1,100	Federal Government	(1)	700
Computer specialists	100	100	50-54	1,400	1,200	State/local government	(1)	200
Environmental scientists	600	500	55-59	1,500	1,300	Other	(1)	300
Life scientists	2,700	2,100	60-64	1,200	800	No report	(1)	100
Psychologists	1,300	1,100	65-69	900	500			
Social scientists	1,900	1,500	70 & Over	800	200			
Engineers	1,400	1,200	No report	100	(1)			
			EMPLOYMENT STATUS			PRIMARY WORK ACTIVITY		
SEX			Full-time employed	(1)	7,900	Research & development	(2)	2,700
			S/E occupation	(1)	7,000	Management of R&D	(2)	700
Men	9,000	7,400	Non-S/E occupation	(1)	900	Management of other	(2)	500
Women	1,300	900	Part-time employed	(1)	400	Teaching	(2)	2,800
			S/E occupation	(1)	300	Consulting	(2)	300
RACE			Non-S/E occupation	(1)	100	Professional services to individuals	(2)	600
			Employed, full/part status unknown	(1)	400	Other and no report	(2)	700
White	9,500	7,700	Unemployed/seeking	100	(2)			
Black	100	(1)	Retired/other	1,800	(2)			
Asian	400	300	No report	(1)	(2)			
Native American	100	100						

[1]Too few cases to estimate. Note: Detail may not add to totals because of rounding. These are preliminary data, subject to revision
[2]Not applicable.

CHAPTER 5

ACADEMIC WORK FORCE

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SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States, 1981, National Science Foundation, NSF 82-332

TABLE 5-1

DOCTORAL SCIENTISTS AND ENGINEERS IN ACADEMIC INSTITUTIONS BY FIELD, RANK AND SEX, 1981

FIELD AND SEX	Professor	%	Associate Professor	%	Assistant Professor	%	Instructor	%	Other	%	Total Faculty**
Total Fields											
Men	**53,918**	**47.3**	**33,536**	**29.4**	**22,056**	**19.3**	**776**	**0.7**	**3,555**	**3.1**	**113,991**
Women	**3,218**	**19.6**	**4,678**	**28.6**	**6,599**	**40.3**	**459**	**2.8**	**1,251**	**7.6**	**16,381**
Physical Scientists											
Men	**9,607**	**55.3**	**4,508**	**26.0**	**2,408**	**13.9**	**66**	**0.4**	**726**	**4.2**	**17,364**
Women	**331**	**29.6**	**294**	**26.3**	**293**	**26.3**	**68**	**6.1**	**118**	**10.6**	**1,116**
Chemists											
Men	5,589	55.8	2,372	23.7	1,504	15.0	16	0.2	484	4.8	10,014
Women	282	29.7	250	26.3	245	25.8	62	6.5	103	10.8	950
Physicists/Astronomers											
Men	4,018	54.7	2,136	29.1	904	12.3	50	0.7	242	3.3	7,350
Women	49	29.5	44	26.5	48	28.9	6	3.6	15	9.0	166
Mathematical Scientists											
Men	**4,768**	**48.0**	**3,101**	**31.2**	**1,765**	**17.8**	**126**	**1.3**	**154**	**1.6**	**9,934**
Women	**186**	**21.0**	**261**	**29.4**	**358**	**46.4**	**34**	**3.8**	**43**	**4.8**	**887**
Mathematicians											
Men	4,121	47.8	2,741	31.8	1,480	17.2	126	1.5	140	1.6	8,620
Women	170	23.5	221	30.6	259	35.8	28	3.9	40	5.5	723
Statisticians											
Men	647	49.2	360	27.4	285	21.7	*	-	14	1.1	1,314
Women	16	9.8	40	24.4	99	60.4	6	3.7	3	1.8	164
Computer Specialists											
Men	**565**	**31.4**	**665**	**37.0**	**473**	**26.3**	**24**	**1.3**	**71**	**3.9**	**1,798**
Women	**14**	**9.2**	**52**	**34.2**	**76**	**50.0**	**6**	**3.9**	**4**	**2.6**	**152**
Environmental Scientists											
Men	**1,940**	**46.2**	**1,243**	**29.6**	**934**	**22.2**	**6**	**0.1**	**77**	**1.8**	**4,280**
Women	**32**	**14.1**	**76**	**33.5**	**111**	**48.9**	*	-	**8**	**3.5**	**227**
Earth Scientists											
Men	1,632	49.7	1,026	31.2	571	17.4	6	0.2	51	1.6	3,286
Women	24	15.0	59	36.9	69	43.1	*	-	8	5.0	160
Oceanographers											
Men	134	30.5	128	29.2	165	37.6	*	-	12	2.7	439
Women	8	17.0	8	17.0	31	66.0	*	-	*	-	47
Atmospheric Scientists											
Men	174	36.6	89	18.7	198	41.7	*	-	14	2.9	475
Women	*	-	9	45.0	11	55.0	*	-	*	-	20
Engineers											
Men	**7,183**	**55.1**	**3,644**	**27.9**	**1,864**	**14.3**	*	-	**352**	**2.7**	**13,043**
Women	**29**	**19.7**	**40**	**27.2**	**76**	**51.7**	*	-	**2**	**1.4**	**147**
Life Scientists											
Men	**12,695**	**43.2**	**8,754**	**29.8**	**6,374**	**21.7**	**353**	**1.2**	**1,174**	**4.0**	**29,404**
Women	**955**	**18.1**	**1,615**	**30.6**	**1,995**	**37.8**	**178**	**3.4**	**472**	**9.0**	**5,271**
Biological Scientists											
Men	7,989	41.8	6,089	31.9	4,098	21.4	226	1.2	667	3.5	19,112
Women	693	18.7	1,092	29.4	1,402	37.8	120	3.2	376	10.1	3,709
Agricultural Scientists											
Men	2,578	52.1	1,216	24.6	1,013	20.5	*	-	145	2.9	4,952
Women	20	15.6	17	13.3	91	71.1	*	-	*	-	128
Medical Scientists											
Men	2,128	39.9	1,449	27.1	1,263	23.7	127	2.4	362	6.8	5,340
Women	242	16.9	506	35.3	502	35.0	58	4.0	96	6.7	1,434
Psychologists											
Men	**5,078**	**44.8**	**3,491**	**30.8**	**2,323**	**20.5**	**29**	**0.3**	**389**	**3.4**	**11,324**
Women	**752**	**20.3**	**875**	**23.6**	**1,605**	**43.4**	**72**	**1.9**	**311**	**8.4**	**3,701**
Social Scientists											
Men	**12,082**	**44.9**	**8,130**	**30.2**	**5,915**	**22.0**	**172**	**0.6**	**612**	**2.3**	**26,924**
Women	**919**	**18.8**	**1,465**	**30.0**	**2,085**	**42.7**	**101**	**2.1**	**293**	**6.0**	**4,880**
Economists											
Men	3,516	50.0	1,663	23.6	1,786	25.4	68	1.0	*	-	7,033
Women	149	25.5	184	31.5	209	35.7	23	3.9	17	2.9	585
Sociologists/Anthropologists											
Men	2,160	38.8	1,998	35.9	1,255	22.5	27	0.5	132	2.4	5,572
Women	343	17.6	630	32.3	825	42.1	12	0.6	137	7.0	1,953
Other Social Scientists											
Men	6,406	44.7	4,469	31.2	2,874	20.1	77	0.5	480	3.4	14,319
Women	427	18.2	651	27.8	1,053	45.0	66	2.8	139	5.9	2,342

* No Cases Reported. ** Includes the "No Report" Category.

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 5–2

ACADEMICALLY EMPLOYED DOCTORATES, BY FIELD OF PhD AND RACIAL/ETHNIC CATEGORY, 1979

Ph.D. Field	Grand Total	Whites		Minorities								
				U.S.-Born					Foreign-Born			
		U.S. Born	Frgn Born	Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Science/Engineering												
Academically Employed	158,578	124,289	15,375	3,807	880	1,484	932	511	8,488	335	447	7,683
Percentages in:												
EMP Fields	38.9	37.0	49.3	28.4	30.7	27.6	27.9	28.2	47.6	46.6	13.6	49.5
Mathematics	7.7	7.4	8.5	6.3	9.7	8.3	2.0	2.3	9.8	14.0	4.7	9.6
Computer Sciences	0.5	0.6	0.1	0.5	0.3	0.0	0.4	2.5	0.6	0.6	0.0	0.6
Physics/Astronomy	8.2	7.5	11.9	5.3	6.9	4.5	4.9	5.7	9.7	1.5	0.0	10.7
Chemistry	9.0	8.7	11.6	10.4	5.9	9.2	14.7	13.9	8.5	14.0	7.6	8.3
Environmental Scis	2.9	3.0	3.4	1.0	2.4	0.1	0.5	2.2	1.4	1.8	1.3	1.4
Engineering	10.6	9.8	13.8	4.9	5.5	5.5	5.3	1.6	17.6	14.6	0.0	18.8
Life Sciences	28.4	29.1	23.0	31.0	33.6	27.8	35.6	27.4	31.6	26.0	31.5	31.9
Agricultural Sciences	4.8	5.1	2.6	5.0	5.2	3.2	6.7	6.8	6.1	12.8	10.5	5.6
Medical Sciences	2.8	2.7	2.7	4.2	5.9	4.6	3.1	2.2	4.2	3.6	4.0	4.3
Biological Sciences	20.7	21.3	17.7	21.8	22.5	19.9	25.9	18.4	21.2	9.6	17.0	22.0
Behavioral Sciences	32.7	33.9	27.7	40.5	35.7	44.6	36.5	44.4	20.8	27.5	54.8	18.6
Psychology	11.1	12.1	6.7	15.7	11.7	18.1	15.1	16.8	1.9	18.5	1.8	1.1
Social Sciences	21.6	21.8	21.0	24.8	24.0	26.5	21.4	27.6	18.9	9.0	53.0	17.5
Humanities												
Academically Employed	52,853	40,247	4,243	1,715	756	674	104	181	1,153	591	93	458
Percentages in:												
History	24.1	25.2	18.3	22.0	20.6	28.2	12.5	9.9	13.0	3.7	40.9	19.7
English	29.1	32.4	9.6	21.8	27.5	20.6	15.4	6.1	7.5	0.8	18.3	11.8
Languages Total	20.2	15.4	51.6	29.9	45.5	14.5	18.3	28.2	53.8	83.8	10.8	25.1
Classics	2.2	2.2	2.9	1.1	0.0	1.9	0.0	3.3	0.6	0.0	0.0	1.5
Modern Languages	18.0	13.2	48.7	28.7	45.5	12.6	18.3	24.9	53.2	83.8	10.8	23.6
Other Humanities	26.5	27.0	20.6	26.4	6.3	36.6	53.8	55.8	25.7	11.7	30.1	43.4
Art History	2.4	2.5	2.7	0.5	0.0	0.1	3.8	2.2	2.4	1.2	0.0	4.6
Music	6.4	7.1	2.5	8.8	1.1	13.5	17.3	18.8	2.0	1.0	6.5	2.4
Speech/Theater	6.0	6.3	2.9	6.9	0.3	11.0	3.8	21.0	1.0	0.0	1.1	2.2
Philosophy	8.3	8.3	7.0	3.9	1.1	1.9	26.0	10.5	12.4	5.6	22.6	19.4
Other Fields	3.4	2.9	5.6	6.2	4.0	10.1	2.9	3.3	7.9	3.9	0.0	14.8

Source: 1979 Survey of Doctorate Recipients.

SOURCE: Science, Engineering, and Humanities Doctorates in the United States, 1983 Profile, National Academy of Sciences/National Research Council, 1984

TABLE 5-3

ACADEMIC POSITION OF DOCTORAL SCIENTISTS AND ENGINEERS BY YEAR OF Ph.D., FIELD OF Ph.D., AND SEX, 1983

1983 Academic Position	Field of Doctorate/Sex							
	All Fields		EMP		Life Sciences		Behav/Soc Sci	
	M	F	M	F	M	F	M	F
Total, 1940-1959 Ph.D.s	28,400	2,000	11,700	500	9,000	900	7,700	700
	%	%	%	%	%	%	%	%
Faculty	92.5	84.0	88.3	84.3	96.2	80.1	94.5	88.3
Professor	85.2	59.6	80.8	61.8	88.0	51.7	88.6	67.5
Associate Professor	6.2	18.7	5.7	15.2	7.8	20.3	5.2	18.9
Assistant Professor	0.7	3.5	1.1	3.6	0.3	5.4	0.7	1.3
Instructor	0.4	2.2	0.8	3.6	0.1	2.7		0.7
Nonfaculty	3.9	7.4	6.7	7.1	1.9	8.7	2.1	6.0
Teaching Staff*	1.1	1.3	0.9	0.9	0.8	0.6	1.9	2.5
Research Staff*	2.8	6.0	5.8	6.2	1.1	8.1	0.2	3.5
Postdoctoral Appointment	0.4	0.5	0.4		0.2	0.6	0.5	0.7
Other/No Report	3.2	8.1	4.6	8.6	1.7	10.6	2.8	5.0
Total, 1960-1969 Ph.D.s	52,100	4,900	24,400	900	13,900	1,900	13,700	2,000
	%	%	%	%	%	%	%	%
Faculty	93.5	84.9	91.3	79.1	95.5	84.9	95.3	87.5
Professor	70.5	41.8	70.5	37.4	70.1	33.9	70.7	51.5
Associate Professor	21.0	32.7	18.9	31.0	23.0	37.1	22.7	29.3
Assistant Professor	1.6	8.4	1.1	7.8	2.4	11.9	1.8	5.3
Instructor	0.4	2.0	0.7	2.9		2.0		1.5
Nonfaculty	4.1	7.6	6.2	11.5	2.1	8.9	2.2	4.5
Teaching Staff*	0.4	1.7	0.3	2.0	0.2	1.4	0.7	1.9
Research Staff*	3.7	5.9	6.0	9.5	1.9	7.6	1.5	2.6
Postdoctoral Appointment	0.1	1.2		1.5	0.3	1.1	0.3	1.2
Other/No Report	2.3	6.3	2.5	7.8	2.1	5.0	2.3	6.9
Total, 1970-1975 Ph.D.s	41,700	7,800	15,400	1,100	12,400	2,900	13,800	3,800
	%	%	%	%	%	%	%	%
Faculty	86.8	83.0	81.6	76.0	88.3	79.7	91.4	87.5
Professor	25.1	14.7	24.9	13.1	20.7	12.5	29.2	17.0
Associate Professor	48.8	44.4	46.6	36.2	50.9	38.6	49.3	51.2
Assistant Professor	12.1	21.4	9.4	21.9	15.7	26.1	12.0	17.6
Instructor	0.8	2.4	0.6	4.8	1.0	2.5	0.8	1.7
Nonfaculty	7.1	7.9	12.7	15.3	5.6	10.1	2.2	4.1
Teaching Staff*	0.7	0.9	0.8	1.6	0.9	0.4	0.4	1.1
Research Staff*	6.4	7.0	12.0	13.7	4.7	9.7	1.8	3.0
Postdoctoral Appointment	1.3	2.9	1.2	1.7	1.3	4.6	1.5	1.9
Other/No Report	4.7	6.3	4.4	7.0	4.8	5.6	4.9	6.5
Total, 1976-1982 Ph.D.s	39,200	12,800	13,600	1,400	12,500	5,200	13,200	6,200
	%	%	%	%	%	%	%	%
Faculty	71.4	62.4	68.1	60.7	62.7	49.9	82.9	73.2
Professor	1.9	2.3	1.4	1.8	0.9	2.2	3.2	2.6
Associate Professor	20.2	12.0	18.4	9.8	13.1	9.1	28.8	14.9
Assistant Professor	47.6	44.8	47.0	47.1	47.0	34.8	48.9	52.6
Instructor	1.7	3.3	1.3	2.1	1.7	3.8	2.0	3.1
Nonfaculty	9.7	10.3	14.6	12.5	7.8	11.3	6.5	9.0
Teaching Staff*	0.8	2.1	0.3	2.1	0.5	2.0	1.4	2.3
Research Staff*	8.9	8.2	14.3	10.5	7.3	9.4	5.0	6.7
Postdoctoral Appointment	13.6	17.4	12.2	18.2	25.3	31.4	3.8	5.6
Other/No Report	5.4	9.9	5.1	8.6	4.2	7.5	6.8	12.2

*Includes nonfaculty staff members whose primary work activity is teaching.
*Includes nonfaculty staff members whose primary work activity is basic research, applied research, development, or Design.
NOTE: EMP = Engineering, Mathematics, Computer Sciences, Physics/Astronomy, Chemistry and Earth/Environmental Sciences.
Life Sciences = Agricultural Sciences, Medical Sciences, and Biological Sciences.
Behav/Soc Sci = Psychology and Social Sciences.

SOURCE: Science, Engineering, and Humanities Doctorates in the United States, 1983 Profile, National Academy of Sciences/National Research Council, 1984

TABLE 5-4

ACADEMIC POSITION OF HUMANITIES Ph.D.'s BY YEAR OF DOCTORATE, AND SEX, 1983 (INCLUDES FULL-TIME AND PART-TIME EMPLOYED Ph.D.'s)

1983 Academic Position/ Year of Ph.D.	Field of Doctorate/Sex									
	All Fields		Eng/Amer Lit		History		Other Lang		Other Humn.	
	M	F	M	F	M	F	M	F	M	F
Total, 1940-1959 Ph.D.s (N)	6,900	900	1,700	300	2,200	200	1,100	200	1,900	200
	%	%	%	%	%	%	%	%	%	%
Faculty	95.3	86.1	99.2	82.6	90.0	87.1	95.0	88.7	98.1	86.3
Professor	86.6	73.2	90.6	70.7	82.2	75.3	86.3	71.8	88.2	76.9
Associate Professor	8.5	10.0	8.6	8.5	7.8	11.8	8.7	13.2	9.1	5.5
Assistant Professor	0.2	2.4		3.5				1.9	0.8	3.8
Instructor		0.6						1.9		
Nonfaculty	1.5	1.9			3.5	1.1	0.6	4.1	1.0	2.2
Teaching Staff*	0.8	1.6			2.2	1.1	0.6	4.1	0.1	0.5
Research Staff+	0.6	0.3			1.2				0.9	1.6
Postdoctoral Appointment	0.8	0.3	0.4		1.3		2.1	1.1		
Other	2.1	9.6	0.4	14.3	5.2	8.1	2.2	6.0	0.1	9.9
No Report	0.2	2.0		3.1		3.8			0.8	1.6
Total, 1960-1969 Ph.D.s (N)	14,100	3,200	3,700	1,200	4,100	400	2,400	900	3,900	700
	%	%	%	%	%	%	%	%	%	%
Faculty	93.5	87.2	90.0	83.2	97.6	89.2	92.9	87.6	92.9	92.1
Professor	69.0	53.6	67.2	54.3	76.6	52.7	58.3	45.7	69.4	62.9
Associate Professor	22.5	28.1	22.8	24.4	18.6	31.6	30.3	35.9	21.5	22.6
Assistant Professor	1.5	3.6		2.9	2.4	4.9	3.6	3.9	0.8	3.7
Instructor	0.5	1.9		1.6			0.8	2.2	1.2	3.0
Nonfaculty	1.8	1.6	2.9		0.7		2.4	2.7	1.5	4.0
Teaching Staff*	1.5	1.1	2.5		0.7		1.4	2.7	1.5	1.6
Research Staff+	0.3	0.5	0.4				1.0			2.4
Postdoctoral Appointment	1.5	1.0		1.4	0.8	1.8	1.3	0.5	3.8	0.3
Other	2.2	7.7	5.2	12.0		6.7	2.4	6.4	1.4	2.9
No Report	1.1	2.5	1.9	3.4	1.0	2.2	1.0	2.8	0.5	0.7
Total, 1970-1975 Ph.D.s (N)	14,600	5,400	3,800	1,900	3,800	800	2,600	1,500	4,400	1,200
	%	%	%	%	%	%	%	%	%	%
Faculty	93.4	84.7	93.8	85.8	94.1	82.7	95.8	85.5	91.0	83.4
Professor	31.4	19.1	27.7	17.3	39.2	23.0	27.1	20.4	30.2	17.7
Associate Professor	50.7	45.5	55.2	47.1	46.9	39.6	53.7	44.8	48.4	47.5
Assistant Professor	9.5	16.4	9.6	19.0	4.9	12.9	13.0	15.2	11.1	16.4
Instructor	1.9	3.7	1.3	2.5	3.1	7.2	2.0	5.1	1.3	1.7
Nonfaculty	1.6	4.3	0.7	4.4	1.5	3.9	1.2	2.3	2.9	7.0
Teaching Staff*	1.3	2.8	0.7	2.7	0.7	3.3	1.0	1.5	2.4	4.2
Research Staff+	0.3	1.5		1.7	0.8	0.7	0.2	0.8	0.4	2.8
Postdoctoral Appointment	0.9	1.1	0.6	0.1	0.8	0.3	1.7	2.8	0.8	0.9
Other	3.0	7.6	3.4	7.5	2.9	11.0	1.4	7.3	3.6	6.0
No Report	1.1	2.3	1.6	2.2	0.7	2.1		2.2	1.7	2.7
Total, 1976-1982 Ph.D.s (N)	9,600	6,400	2,300	1,900	2,000	600	1,500	1,900	3,800	2,000
	%	%	%	%	%	%	%	%	%	%
Faculty	86.6	76.3	82.7	74.5	82.8	79.9	87.8	75.4	90.5	77.8
Professor	9.0	4.3	11.2	6.4	11.9	0.3	3.9	2.9	8.2	4.7
Associate Professor	30.0	17.9	25.2	23.5	28.3	13.8	26.5	12.5	35.2	18.9
Assistant Professor	43.6	48.6	40.6	36.6	37.2	61.4	55.6	55.4	43.9	49.5
Instructor	4.1	5.6	5.7	8.0	5.5	4.3	1.8	4.5	3.3	4.7
Nonfaculty	3.5	4.8	2.8	5.2	5.8	1.7	2.3	6.1	3.3	4.1
Teaching Staff*	3.1	3.5	2.8	3.9	3.9	0.2	1.7	5.1	3.3	2.7
Research Staff+	0.5	1.3		1.3	1.9	1.5	0.6	1.0		1.4
Postdoctoral Appointment	1.1	3.4	1.1	1.3	1.5	1.7	2.2	4.5	0.3	4.7
Other	6.1	13.2	6.9	15.2	9.1	16.7	6.5	12.6	3.9	11.0
No Report	2.7	2.3	6.5	3.8	0.9		1.1	1.4	1.9	2.4

*Includes nonfaculty staff members whose primary work activity is teaching.
+Includes nonfaculty staff members whose primary work activity is basic research, applied research, development, or design.

SOURCE: Employment of Minority Ph.D.'s. Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 5-5

PERCENTAGE OF ACADEMICALLY EMPLOYED SCIENCE AND ENGINEERING PhDs BY FIELD AND RACIAL/ETHNIC CATEGORY

Ph.D. Field	Grand Total	Whites		Minorities								
		U.S. Born	Frgn Born	U.S.-Born					Foreign-Born			
				Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Total Sci/Engin Employed	295,731	231,029	27,044	6,313	1,423	2,531	1,581	778	19,516	848	638	18,007
% in Academe	53.6	53.8	56.9	60.3	61.8	58.6	59.0	65.7	43.5	39.5	70.1	42.7
EMP Employed	142,110	105,991	15,510	1,992	445	704	579	264	13,035	387	148	12,477
% in Academe	43.4	43.4	48.9	54.4	60.7	58.1	44.9	54.5	31.0	40.3	41.2	30.5
Mathematics Employed	16,035	12,137	1,620	296	89	153	23	31	1,082	53	*	985
% in Academe	76.6	75.4	80.5	80.7	95.5	80.4	82.6	38.7	76.8	88.7	*	75.1
Computer Sci Employed	1,783	1,375	144	23	*	*	*	16	170	17	*	153
% in Academe	45.3	51.3	11.8	87.0	*	*	*	81.3	28.2	11.8	*	30.1
Physics/Astronomy Employed	25,611	19,145	3,223	402	85	156	85	76	1,439	16	*	1,423
% in Academe	50.6	48.4	56.6	50.5	71.8	42.9	54.1	38.2	57.3	31.3	*	57.6
Chemistry Employed	41,970	32,356	4,784	761	138	266	272	85	2,773	168	71	2,534
% in Academe	34.1	33.6	37.4	52.2	37.7	51.5	50.4	83.5	26.0	28.0	47.9	25.3
Environmental Sci Employed	9,729	8,073	943	100	36	13	24	27	338	8	*	324
% in Academe	46.9	46.5	56.1	38.0	58.3	7.7	20.8	40.7	34.9	75.0	*	32.7
Engineering Employed	46,982	32,905	4,796	410	94	116	171	29	7,233	125	*	7,058
% in Academe	35.6	37.2	44.2	45.4	51.1	69.8	28.7	27.6	20.7	39.2	*	20.5
Life Sci Employed	70,929	56,859	5,503	1,777	400	682	500	195	4,184	269	163	3,752
% in Academe	63.6	63.5	64.3	66.5	74.0	60.6	66.4	71.8	64.1	32.3	86.5	65.4
Agricultural Sci Employed	13,430	11,046	795	244	67	53	65	59	914	74	59	781
% in Academe	57.3	57.3	50.4	78.3	68.7	90.6	95.4	59.3	56.9	58.1	79.7	55.1
Medical Sci Employed	7,949	5,929	754	278	94	120	46	18	647	28	18	601
% in Academe	56.5	56.8	55.4	57.9	55.3	57.5	63.0	61.1	55.5	42.9	100.0	54.7
Biological Sci Employed	49,550	39,884	3,954	1,255	239	509	389	118	2,623	167	86	2,370
% in Academe	66.4	66.3	68.7	66.1	82.8	58.2	62.0	79.7	68.7	19.2	88.4	71.5
Behavioral Sci Employed	82,692	68,179	6,031	2,544	578	1,145	502	319	2,297	192	327	1,778
% in Academe	62.7	61.8	70.6	60.7	54.3	57.8	67.7	71.2	76.9	47.9	74.9	80.4
Psychology Employed	36,600	31,382	2,050	1,192	260	559	242	131	296	113	18	165
% in Academe	48.0	47.9	50.4	50.3	39.6	48.1	58.3	65.6	53.4	54.9	44.4	53.3
Social Sci Employed	46,092	36,797	3,981	1,352	318	586	260	188	2,001	79	309	1,613
% in Academe	74.4	73.7	81.0	69.8	66.4	67.1	76.5	75.0	80.4	38.0	76.7	83.1

*Population estimates based on less than 3 respondents have not been reported.

Source: 1979 Survey of Doctorate Recipients.

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 5-6

PERCENTAGE OF ACADEMICALLY EMPLOYED HUMANITIES DOCTORATES BY FIELD AND RACIAL/ETHNIC CATEGORY, 1979

Ph.D. Field	Grand Total	Whites		Minorities								
				U.S.-Born					Foreign-Born			
		U.S. Born	Fgn Born	Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Total Humanities Employed	62,896	48,068	4,882	2,103	920	795	127	261	1,263	632	97	522
% in Academe	84.0	83.7	86.9	81.6	82.2	84.8	81.9	69.3	91.3	93.5	95.9	87.7
History Employed	16,258	13,120	810	464	175	225	13	51	150	22	38	90
% in Academe	78.5	77.3	95.7	81.3	89.1	84.4	100.0	35.3	100.0	100.0	100.0	100.0
English Employed	17,653	14,865	595	462	271	156	19	13	93	*	17	60
% in Academe	87.1	87.7	68.2	81.0	75.9	89.1	84.2	84.6	93.5	*	100.0	90.0
Total Languages Employed	12,505	7,327	2,514	607	404	113	39	51	683	529	14	139
% in Academe	85.5	84.5	87.0	84.3	85.1	86.7	48.7	100.0	90.8	93.6	71.4	87.7
Classics Employed	1,530	1,108	189	38	*	13	*	*	*	*	*	*
% in Academe	77.3	79.5	64.0	50.0	*	100.0	*	*	*	*	*	*
Modern Languages Employed	10,975	6,219	2,325	569	396	100	28	45	676	529	14	132
% in Academe	86.7	85.4	88.9	86.6	86.9	85.0	67.9	100.0	90.7	93.6	71.4	81.8
Other Humanities Employed	16,480	12,756	963	570	67	301	56	146	337	76	28	233
% in Academe	85.0	85.3	90.8	79.3	71.6	82.1	100.0	69.2	87.8	90.8	100.0	85.4
Art History Employed	1,535	1,201	131	19	*	*	*	10	31	*	*	21
% in Academe	83.5	83.7	87.8	47.4	*	*	*	40.0	90.3	*	*	100.0
Music Employed	4,043	3,412	114	188	14	117	18	39	36	9	*	21
% in Academe	84.1	83.9	91.2	80.3	57.1	77.8	100.0	87.2	63.9	66.7	*	52.4
Speech/Theater Employed	3,689	2,891	121	123	*	79	*	38	11	*	*	*
% in Academe	86.3	87.1	100.0	95.9	*	93.7	*	100.0	100.0	*	*	*
Philosophy Employed	5,187	3,939	337	110	8	24	27	51	159	34	21	104
% in Academe	84.1	85.0	87.5	60.9	100.0	54.2	100.0	37.3	89.9	97.1	100.0	85.6
Other Fields Employed	2,026	1,313	260	139	43	74	*	8	100	23	*	77
% in Academe	88.2	87.5	91.9	82.3	69.8	89.5	*	75.0	91.0	100.0	*	88.3

*Population estimates based on less than 3 respondents have not been reported.

Source: 1979 Survey of Doctorate Recipients.

SOURCE: Science, Engineering, and Humanities Doctorates in the United States, 1983 Profile, National Academy of Sciences/National Research Council, 1984

TABLE 5-7

TENURE STATUS OF ACADEMICALLY EMPLOYED SCIENCE AND ENGINEERING Ph.D.'s BY FIELD OF DOCTORATE, AGE, AND SEX, 1983

Age and Tenure Status	Field of Doctorate/Sex							
	All Fields		EMP		Life Sciences		Behav/Soc Sci	
	M	F	M	F	M	F	M	F
Total Academically Employed (N)	161,400	27,500	65,200	3,900	47,800	10,900	48,400	12,700
	%	%	%	%	%	%	%	%
Tenured	65.5	39.2	64.8	38.9	62.2	32.1	69.6	45.4
Not Tenured	25.8	47.1	24.6	45.7	29.2	51.4	24.2	43.9
In Track Position	14.0	20.9	12.5	20.2	15.8	17.6	14.2	24.0
Not in Track Position	8.4	19.9	8.2	20.4	10.0	26.6	7.0	14.0
Type Position Unkownn	3.5	6.3	3.9	5.1	3.4	7.2	3.0	5.9
No Report	8.7	13.7	10.5	15.4	8.6	16.5	6.2	10.7
Age - 35 or Under (N)	26,400	7,600	9,900	1,100	8,900	3,200	7,600	3,300
	%	%	%	%	%	%	%	%
Tenured	13.4	7.6	13.5	7.3	6.4	3.4	21.3	11.7
Not Tenured	66.0	69.5	64.8	66.6	69.7	66.7	63.1	73.0
In Track Position	44.0	36.8	43.9	40.7	42.6	25.5	45.8	46.4
Not in Track Position	15.4	25.1	14.4	21.6	20.8	32.1	10.5	19.4
Type Position Unknown	6.5	7.6	6.5	4.3	6.3	9.1	6.8	7.2
No Report	20.7	23.0	21.7	26.1	23.9	29.9	15.6	15.3
Age - 36 to 45 (N)	63,400	11,700	25,900	1,600	18,700	4,600	18,800	5,500
	%	%	%	%	%	%	%	%
Tenured	63.9	41.8	64.1	40.6	60.0	33.7	67.6	49.0
Not Tenured	28.9	46.7	26.7	45.6	33.5	53.1	27.5	41.7
In Track Position	15.6	20.4	13.0	18.4	18.7	19.3	16.2	21.9
Not in Track Position	9.8	19.8	9.6	22.1	10.9	26.3	8.8	13.5
Type Position Unknown	3.6	6.6	4.1	5.1	3.9	7.5	2.5	6.3
No Report	7.1	11.5	9.2	13.8	6.5	13.2	4.9	9.3
Age - 46 or Older (N)	71,500	8,200	29,400	1,200	20,200	3,000	21,900	3,900
	%	%	%	%	%	%	%	%
Tenured	86.2	64.9	82.7	65.0	88.8	60.0	88.4	68.8
Not Tenured	8.2	27.0	9.3	27.1	7.3	32.8	7.6	22.5
In Track Position	1.5	7.0	1.6	4.2	1.4	6.8	1.3	8.0
Not in Track Position	4.5	15.3	4.9	17.0	4.3	21.2	4.2	10.3
Type Position Unknown	2.2	4.6	2.8	5.9	1.6	4.8	2.1	4.2
No Report	5.6	8.1	8.0	7.9	3.9	7.2	4.0	8.8

NOTE: EMP = Engineering, Mathematics, Computer Sciences, Physics/Astronomy, Chemistry and Earth/Environmental Sciences.
Life Sciences = Agricultural Sciences, Medical Sciences, and Biological Sciences.
Behav/Soc Sci = Psychology and Social Sciences.

SOURCE: Science, Engineering, and Humanities Doctorates in the United States, 1983 Profile, National Academy of Sciences/National Research Council, 1984

TABLE 5-8

TENURE STATUS OF ACADEMICALLY EMPLOYED Ph.D.'s IN THE HUMANITIES BY FIELD OF DOCTORATE, AGE, AND SEX, 1983

Age and Tenure	Field of Doctorate/Sex									
	All Fields		Eng/Amer Lit		History		Other Lang		Other Humn.	
	M	F	M	F	M	F	M	F	M	F
Total Academically Employed (N)	45,300	15,800	11,600	5,200	12,100	2,000	7,700	4,500	13,900	4,100
	%	%	%	%	%	%	%	%	%	%
Tenured	77.2	51.1	79.0	54.7	80.4	51.7	76.6	50.6	73.2	46.8
Not Tenured	17.9	39.4	16.3	34.3	16.1	39.0	18.5	40.2	20.3	45.1
Tenure Track	9.5	17.0	9.5	12.5	6.7	13.3	10.6	19.5	11.4	21.7
Non-Tenure Track	5.7	16.5	4.4	16.0	7.2	20.1	5.1	15.0	5.7	17.1
Type Position Unknown	2.6	5.9	2.4	5.8	2.2	5.6	2.8	5.7	3.2	6.3
No Report	4.9	9.5	4.6	11.0	3.5	9.2	4.8	9.1	6.5	8.0
Age - 35 or Under (N)	3,500	2,100	900	500	700	200	600	700	1,300	700
	%	%	%	%	%	%	%	%	%	%
Tenured	18.5	12.6	15.8	23.1	17.4	3.3	18.0	9.9	21.3	10.7
Not Tenured	71.9	74.2	75.4	59.8	78.1	86.7	74.8	75.2	64.8	79.4
Tenure Track	48.8	45.5	68.1	25.7	21.5	52.3	48.1	54.2	49.8	49.1
Non-Tenure Track	13.4	22.3	0.3	32.2	37.5	27.8	19.0	13.4	7.2	22.0
Type Position Unknown	9.8	6.4	7.0	2.0	19.1	6.6	7.7	7.6	7.7	8.3
No Report	9.6	13.2	8.9	17.1	4.6	10.0	7.2	14.9	13.9	10.0
Age - 36 to 45 (N)	17,500	6,700	4,800	2,100	4,500	800	2,900	2,000	5,300	1,800
	%	%	%	%	%	%	%	%	%	%
Tenured	71.8	46.4	79.5	48.3	72.2	50.5	70.9	46.1	64.9	42.8
Not Tenured	23.4	44.6	15.0	39.7	23.4	41.2	25.7	45.8	29.7	50.4
Tenure Track	12.7	19.5	7.2	14.9	12.4	13.3	15.7	22.4	16.4	24.5
Non-Tenure Track	7.9	17.9	5.4	15.8	10.4	22.6	6.8	16.8	8.7	19.4
Type Positoin Unknown	2.7	7.2	2.4	9.0	0.6	5.3	3.1	6.6	4.7	6.5
No Report	4.8	9.0	5.5	12.0	4.4	8.3	3.5	8.2	5.4	6.8
Age - 46 or Older (N)	24,200	6,900	5,800	2,500	6,900	900	4,200	1,900	7,300	1,600
	%	%	%	%	%	%	%	%	%	%
Tenured	89.6	67.4	88.6	65.9	92.5	65.9	89.0	70.2	88.2	67.5
Not Tenured	6.0	23.8	8.1	25.1	4.6	24.2	5.6	21.9	5.9	23.8
Tenure Track	1.6	5.9	2.2	8.0	1.6	2.7	1.7	4.0	1.2	6.3
Non-Tenure Track	3.0	13.5	4.3	13.1	2.1	15.8	2.0	13.8	3.4	12.5
Type Position Unknown	1.4	4.5	1.6	4.1	0.8	5.7	1.9	4.1	1.4	5.0
No Report	4.4	8.8	3.3	9.0	2.9	9.9	5.5	8.0	5.9	8.7

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 5-9

TENURE STATUS OF ACADEMICALLY EMPLOYED DOCTORATES BY YEAR OF PhD AND RACIAL/ETHNIC CATEGORY, 1979

Tenure Status by Year of Ph.D.	Grand Total	Whites		Minorities								
				U.S.-Born					Foreign-Born			
		U.S. Born	Frgn Born	Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Science/Engineering												
Total 1960-78 Ph.D.s†	111,202	87,981	9,867	2,904	763	1,007	682	452	6,273	291	332	5,627
% Tenured	62.2	61.3	66.5	57.1	58.2	45.1	63.0	73.0	61.8	42.6	52.7	63.6
% Not Tenured-In Track	24.1	25.1	19.1	28.2	28.6	36.8	22.0	17.9	20.9	38.8	44.0	18.3
% Not In Track	13.7	13.5	14.3	14.7	13.2	18.1	15.0	9.1	17.3	18.6	3.3	18.1
Total 1960-69 Ph.D.s	52,044	39,816	5,664	1,153	264	237	417	235	2,958	89	68	2,801
% Tenured	87.6	87.6	86.1	89.9	95.5	82.7	85.9	97.9	87.5	96.6	100.0	86.9
% Not Tenured-In Track	5.1	5.1	5.9	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	5.0
% Not In Track	7.3	7.2	7.9	10.1	4.5	17.3	14.1	2.1	7.7	3.4	0.0	8.1
Total 1970-78 Ph.D.s	59,158	48,165	4,203	1,751	499	770	265	217	3,315	202	264	2,826
% Tenured	39.9	39.6	40.2	35.5	38.5	33.5	27.2	46.1	38.8	18.8	40.5	40.4
% Not Tenured-In Track	40.8	41.6	36.9	46.8	43.7	48.2	56.6	37.3	35.3	55.9	55.3	31.5
% Not In Track	19.3	18.7	23.0	17.6	17.8	18.3	16.2	16.6	25.9	25.2	4.2	28.1
Humanities												
Total 1960-78 Ph.D.s	41,238	32,090	3,294	1,377	631	523	81	142	982	476	83	412
% Tenured	67.9	66.5	70.1	59.8	60.4	60.4	60.5	54.2	63.0	69.7	41.0	61.4
% Not Tenured-In Track	18.8	19.8	17.1	29.4	26.1	32.1	34.6	31.0	22.5	19.5	43.4	21.1
% Not In Track	13.3	13.7	12.9	10.8	13.5	7.5	4.9	14.8	14.5	10.7	15.7	17.5
Total 1960-69 Ph.D.s	16,183	11,961	1,478	431	205	157	33	36	271	142	*	126
% Tenured	92.8	92.6	93.6	90.7	87.3	91.1	100.0	100.0	98.2	96.5	*	100.0
% Not Tenured-In Track	3.3	3.3	4.5	9.3	12.7	8.9	0.0	0.0	1.8	3.5	*	0.0
% Not In Track	3.9	4.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0
Total 1970-78 Ph.D.s	25,055	20,129	1,816	946	426	366	48	106	711	334	80	286
% Tenured	51.8	51.0	50.9	45.7	47.4	47.3	33.3	38.7	49.6	58.4	38.8	44.4
% Not Tenured-In Track	28.9	29.6	27.3	38.6	32.6	42.1	58.3	41.5	30.4	26.3	45.0	30.4
% Not In Track	19.3	19.4	21.8	15.8	20.0	10.7	8.3	19.8	20.0	15.3	16.3	25.2

*Population estimates based on less than 3 respondents have not been reported.
†Totals include only those individuals academically-employed who reported tenure status.

Source: 1979 Survey of Doctorate Recipients.

SOURCE: National Center for Education Statistics, Preliminary Releases and Unpublished Data

TABLE 5-10

PERCENT OF FACULTY MEMBERS WITH TENURE, SELECTED YEARS, 1977-78 - 1982-83

ACADEMIC RANK	ALL INSTITUTIONS				UNIVERSITIES				OTHER FOUR-YEAR INSTITUTIONS				TWO-YEAR INSTITUTIONS			
	1977-78	1979-80	1981-82	1982-83	1977-78	1979-80	1981-82	1982-83	1977-78	1979-80	1981-82	1982-83	1977-78	1979-80	1981-82	1982-83
Professors	95.8	96.0	93.3	95.6	96.8	96.9	96.1	96.8	94.9	94.9	91.4	94.4	97.3	95.9	88.3	95.3
Men	95.9	96.2	93.6	95.7	96.9	97.0	96.3	96.9	95.0	95.1	91.5	94.5	97.1	95.8	88.6	95.7
Women	94.8	94.4	91.1	94.3	95.2	95.4	94.6	95.1	94.3	93.4	90.3	94.0	98.1	96.2	87.5	93.9
Assoc. Professor	82.5	82.9	79.8	82.1	82.8	83.9	82.9	83.8	80.9	81.2	77.2	79.8	92.8	89.0	83.1	88.9
Men	82.7	83.3	80.0	82.2	83.1	84.1	82.9	83.8	81.2	81.7	77.4	80.0	92.8	89.4	83.8	89.5
Women	81.8	81.5	79.0	81.7	80.5	82.7	82.7	83.8	80.0	79.2	76.4	79.1	92.7	88.0	81.7	87.7
Ass't. Professor	31.0	28.9	26.1	26.8	17.6	18.0	14.4	14.6	32.2	31.5	27.7	28.4	61.6	57.3	53.4	58.4
Men	29.7	27.5	24.9	26.5	16.1	16.2	12.9	13.2	31.4	30.9	27.1	27.8	63.4	58.6	55.4	60.0
Women	33.7	31.7	28.4	29.2	21.3	22.2	17.8	17.8	33.8	32.7	28.7	29.4	58.7	55.3	50.6	56.0
Instructors	10.0	10.2	8.2	9.0	5.2	6.5	4.8	4.9	8.5	7.9	6.3	6.7	19.4	22.8	16.4	19.9
Men	10.4	10.8	8.6	9.7	5.0	6.4	4.7	4.8	8.7	8.3	6.3	7.0	20.7	24.8	18.5	21.8
Women	9.6	9.6	7.7	8.5	5.4	6.5	4.9	4.9	8.3	7.6	6.3	6.5	18.0	20.8	14.4	18.1
Lecturers	3.0	5.9	10.6	11.0	4.5	8.6	3.6	3.6	0.8	0.8	15.4	16.3	3.3	5.7	30.0	32.3
Men	3.8	6.7	10.6	11.2	5.2	9.4	4.7	4.4	1.3	1.1	14.6	16.4	6.7	10.3	30.4	32.4
Women	2.0	4.9	10.6	10.8	3.4	7.6	2.3	2.7	0.2	0.4	16.4	16.2	1.1	2.4	29.6	32.1
No Academic Rank	73.4	76.3	47.4	77.2	1.3	1.2	0.9	0.7	30.9	28.0	14.5	32.7	75.9	81.0	50.4	81.2
Men	77.0	79.1	50.3	80.1	1.9	1.8	1.6	1.1	33.3	30.2	15.7	36.6	79.7	83.3	53.5	84.0
Women	66.2	70.7	42.4	71.9	0.0	0.0	0.0	0.0	28.4	24.2	12.1	25.8	68.4	73.3	45.0	76.0
All Academic Ranks	62.7	63.6	59.1	65.4	62.4	64.4	64.2	65.5	59.9	59.5	58.2	61.6	70.8	73.3	54.4	75.0
Men	67.5	68.7	64.6	70.4	67.7	69.7	69.7	70.9	64.9	65.3	63.4	67.3	75.3	77.2	58.2	78.9
Women	48.2	48.0	44.1	51.0	38.3	41.7	41.0	42.9	45.2	43.8	43.1	46.4	62.4	65.8	47.9	68.2

Note: 1977-78 figures based on a 67% response, 1979-80 figures based on a 70.3% response.

SOURCE: National Center for Education Statistics, Unpublished Data

TABLE 5-11

NUMBER OF FULL-TIME INSTRUCTIONAL FACULTY AND PERCENT TENURED BY SEX, ACADEMIC RANK AND CONTROL OF INSTITUTION, 1982-83

ACADEMIC RANK	Number of Faculty Members			Percent with Tenure		
	Total	Men	Women	Total	Men	Women
Public Universities						
Professors	35,674	33,409	2,265	97.2	97.3	95.3
Associate Professors	25,937	21,307	4,630	87.0	86.9	87.1
Assistant Professors	21,983	15,241	6,742	16.5	14.7	20.5
Instructors	4,188	1,903	2,285	5.5	5.5	5.5
Lecturers	2,321	1,251	1,070	4.3	5.3	3.2
No Academic Rank	581	364	217	0.9	1.4	0.0
All Ranks Combined	90,684	73,475	17,209	67.5	72.7	45.0
Private Universities						
Professors	13,034	12,119	915	95.8	95.9	94.8
Associate Professors	9,142	7,364	1,778	74.9	74.9	75.0
Assistant Professors	9,165	6,214	2,951	10.3	9.6	11.7
Instructors	1,486	734	752	3.2	3.0	3.3
Lecturers	726	374	352	1.4	1.3	1.4
No Academic Rank	165	90	75	0.0	0.0	0.0
All Ranks Combined	33,718	26,895	6,823	60.3	66.0	37.8
Other Public 4-Yr Institutions						
Professors	36,191	31,603	4,588	95.7	95.7	95.8
Associate Professors	33,465	26,140	7,325	83.3	83.4	83.1
Assistant Professors	30,413	18,950	11,463	34.6	33.8	36.0
Instructors	9,513	4,546	4,967	9.0	9.3	8.8
Lecturers	2,457	1,297	1,160	19.1	19.3	19.0
No Academic Rank	717	452	265	19.4	22.8	13.6
All Ranks Combined	112,756	82,988	29,768	66.1	71.4	51.4
Other Private 4-Yr Institutions						
Professors	18,027	15,721	2,306	91.9	92.1	90.3
Associate Professors	17,960	13,761	4,199	73.2	73.5	72.1
Assistant Professors	19,650	12,154	7,496	18.8	18.5	19.3
Instructors	6,157	2,982	3,175	3.2	3.6	2.9
Lecturers	449	238	211	0.9	0.8	0.9
No Academic Rank	1,167	753	414	40.9	44.9	33.6
All Ranks Combined	63,410	45,609	17,801	53.7	59.8	38.1
Public 2-Yr Institutions						
Professors	6,231	4,748	1,483	95.7	96.3	94.7
Associate Professors	8,947	6,007	2,940	89.1	89.8	87.9
Assistant Professors	9,269	5,418	3,851	59.0	60.7	56.7
Instructors	5,190	2,559	2,631	20.3	22.2	18.4
Lecturers	337	143	194	32.6	32.9	32.5
No Academic Rank	35,087	22,742	12,345	81.7	84.4	76.7
All Ranks Combined	65,061	41,617	23,414	75.9	79.4	69.0
Private 2-Yr Institutions						
Professors	175	115	60	78.9	81.7	73.3
Associate Professors	206	139	67	77.2	77.0	77.6
Assistant Professors	275	126	149	35.6	31.7	38.9
Instructors	322	139	183	13.7	14.4	13.1
Lecturers	4	2	2	0.0	0.0	0.0
No Academic Rank	741	449	292	56.7	62.4	47.9
All Ranks Combined	1,723	970	753	49.9	55.8	42.2
All Institutions, Public & Private						
Professors	109,332	97,715	11,617	95.6	95.7	94.3
Associate Professors	95,657	74,717	20,939	82.1	82.2	81.7
Assistant Professors	90,755	58,103	32,652	26.8	25.5	29.2
Instructors	26,856	12,863	13,993	9.0	9.7	8.5
Lecturers	6,294	3,305	2,989	11.0	11.2	10.8
No Academic Rank	38,458	24,850	13,608	77.2	80.1	71.9
All Ranks Combined	367,352	271,554	95,798	65.4	70.4	51.0

Note: Includes only institutions reporting tenured faculty members.

SOURCE: Academic Science: Scientists and Engineers, January 1981, Detailed Statistical Tables, NSF 82-305, Academic Science/Engineering: Scientists and Engineers, January 1982, Detailed Statistical Tables, NSF 83-311, and Academic Science/Engineering: Scientists and Engineers, January 1983, Detailed Statistical Tables, unpublished, National Science Foundation

TABLE 5-12

NUMBER AND PERCENT OF SCIENTISTS AND ENGINEERS EMPLOYED FULL-TIME IN COLLEGES AND UNIVERSITIES BY FIELD OF EMPLOYMENT AND SEX, SELECTED YEARS, JANUARY 1974 - 1983

FIELD	1974			1976			1978			1980			1982			1983		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
ENGINEERS	22,764	339	1.5	22,924	449	2.0	24,666	598	2.4	26,472	713	2.7	28,049	875	3.1	28,816	1,013	3.5
Aero. & Astro.	1,023	22	2.1	966	30	3.1	964	18	1.9	1,144	27	2.4	1,083	21	1.9	1,091	23	2.1
Chemical	1,522	22	1.4	1,638	37	2.3	1,725	33	1.9	1,886	59	3.1	1,911	96	5.0	1,952	96	4.9
Civil	3,759	61	1.6	4,015	83	2.1	4,240	128	3.0	4,325	118	2.7	4,736	166	3.5	4,989	210	4.2
Electrical	5,404	57	1.1	5,405	74	1.4	5,593	91	1.6	6,374	114	1.8	6,811	136	2.0	7,171	167	2.3
Mechanical	4,255	33	0.8	4,346	45	1.0	4,523	61	1.3	4,817	92	1.9	5,094	98	1.9	5,117	98	1.9
Other	6,801	144	2.1	6,554	180	2.7	7,612	267	3.5	7,926	303	3.8	8,414	358	4.3	8,496	419	4.9
PHYSICAL SCIENTISTS	26,849	1,939	7.2	27,086	2,106	7.8	27,902	2,451	8.8	27,993	2,491	8.9	28,505	2,668	9.4	28,376	2,684	9.5
Chemists	14,075	1,385	9.8	14,140	1,507	10.7	14,736	1,724	11.7	14,330	1,779	12.4	14,800	1,898	12.8	14,748	1,950	13.2
Physicists	10,870	395	3.6	10,822	394	3.6	11,254	483	4.3	11,323	492	4.3	11,154	511	4.6	11,387	524	4.6
Astronomers	†	†	-	†	†	-	†	†	-	818	68	8.3	1,060	81	7.6	858	66	7.7
Other	1,904	159	8.4	2,124	205	9.7	1,912	244	12.8	1,522	152	10.0	1,491	178	11.9	1,383	144	10.4
ENVIRONMENTAL SCIENTISTS	6,563	327	5.0	7,258	390	5.4	8,181	569	7.0	8,333	660	7.9	8,568	809	9.4	8,688	821	9.4
Atmospheric Scientists	571	39	6.8	602	33	5.5	821	35	4.3	793	44	5.5	761	50	6.6	887	70	7.9
Earth Scientists	4,957	229	4.6	5,527	287	5.2	5,963	411	6.9	5,554	398	7.2	5,670	456	8.0	5,574	461	8.3
Oceanographers	1,035	59	5.7	1,179	70	6.2	1,397	123	8.8	1,385	127	9.2	1,394	199	14.3	1,520	203	13.4
Other	†	†	-	†	†	-	†	†	-	601	91	15.1	743	104	14.0	707	87	12.3
MATH/COMPUTER SCIENTISTS	22,260	2,925	13.1	23,125	3,104	13.4	24,349	3,475	14.3	26,030	4,085	15.7	28,322	4,861	17.2	29,893	5,303	17.7
Mathematicians	18,532	2,479	13.4	18,993	2,622	13.8	19,564	2,915	14.9	19,914	3,176	15.9	20,559	3,518	17.1	21,038	3,695	17.6
Computer Scientists*	3,728	446	12.0	4,132	482	11.7	4,785	560	11.7	6,116	909	14.9	7,763	1,343	17.3	8,855	1,608	18.2
LIFE SCIENTISTS	88,801	18,045	20.3	91,857	18,286	19.9	97,726	19,950	20.4	108,155	24,101	22.3	115,214	28,661	24.9	118,868	30,897	26.0
Agricultural Scientists	12,785	1,550	12.1	12,941	1,165	9.0	13,704	1,239	9.0	14,440	1,327	9.2	14,716	1,477	10.0	15,037	1,569	10.4
Biological Scientists	32,142	6,319	19.7	34,891	7,026	20.1	37,661	7,791	20.7	38,714	8,217	21.2	40,175	9,123	22.7	40,903	9,489	23.2
Medical Scientists	43,874	10,176	23.2	44,025	10,095	22.9	46,361	10,920	23.6	50,316	11,715	23.3	53,009	13,239	25.0	53,646	13,308	24.8
Other	†	†	-	†	†	-	†	†	-	4,685	2,842	60.7	7,314	4,822	65.9	8,282	6,531	70.4
PSYCHOLOGISTS	14,957	3,188	21.3	16,787	3,983	23.7	17,406	4,314	24.8	16,733	4,318	25.8	16,767	4,450	26.5	16,788	4,451	26.5
SOCIAL SCIENTISTS	36,620	5,768	15.8	40,750	7,186	17.6	41,836	7,584	18.1	41,154	7,829	19.0	41,638	8,109	19.5	41,526	7,911	19.1
Economists	9,830	788	8.0	10,369	933	9.0	10,854	968	8.9	11,092	1,110	10.0	11,402	1,198	10.5	11,554	1,213	10.5
Sociologists	10,048	2,376	23.6	9,065	1,029	11.4	9,055	1,079	11.9	8,767	1,112	12.7	9,187	1,283	14.0	9,151	1,248	13.6
Political Scientists	8,396	863	10.3	11,425	2,926	25.6	11,502	3,027	26.3	10,860	2,940	27.1	10,779	3,038	28.2	10,458	2,860	27.3
Other Social Scientists	8,346	1,741	20.9	9,891	2,298	23.2	10,425	2,510	24.1	10,435	2,667	25.6	10,270	2,590	25.2	10,363	2,590	25.0
TOTAL	218,407	32,124	14.7	229,787	35,504	15.5	242,066	38,941	16.1	254,870	44,197	17.3	267,063	50,433	18.9	272,953	53,080	19.4

† Data not available prior to 1980. * Excluding programmers.

SOURCE: Academic Science/Engineering: Graduate Enrollment and Support, Fall 1982, NSF 84-306, National Science Foundation

TABLE 5-13

SCIENTISTS AND ENGINEERS EMPLOYED BY UNIVERSITIES AND COLLEGES BY FIELD, EMPLOYMENT STATUS AND SEX, JANUARY 1980-1983

FIELD OF EMPLOYMENT	MALE						FEMALE					
	Full-Time			Part-Time			Full-Time			Part-Time		
	1980	1982	1983	1980	1982	1983	1980	1982	1983	1980	1982	1983
TOTAL	210,775	217,094	219,875	51,816	60,441	63,417	44,215	50,677	53,080	17,443	21,098	22,452
ENGINEERS	25,759	27,090	27,803	6,987	8,027	8,431	713	860	1,013	278	358	449
Aeronautical and Astronautical Engineers	1,117	1,064	1,068	248	229	226	27	20	23	15	10	13
Chemical Engineers	1,827	1,820	1,856	445	327	425	59	90	96	21	26	40
Civil Engineers	4,207	4,572	4,779	1,167	1,287	1,311	118	167	210	37	65	75
Electrical Engineers	6,260	6,657	7,004	1,751	2,186	2,352	114	132	167	29	61	75
Mechanical Engineers	4,725	4,948	5,019	1,228	1,548	1,561	92	90	98	29	51	53
Other Engineers	7,623	8,029	8,077	2,148	2,450	2,556	303	361	419	147	145	193
PHYSICAL SCIENTISTS	25,502	25,889	25,692	4,237	4,602	4,916	2,491	2,649	2,684	1,324	1,323	1,368
Astronomers	750	932	792	117	166	184	68	74	66	20	31	29
Chemists	12,551	12,728	12,798	2,245	2,418	2,451	1,779	1,897	1,950	1,039	985	1,043
Physicists	10,831	10,915	10,863	1,524	1,651	1,947	492	510	524	160	192	217
Other Physical Scientists	1,370	1,314	1,239	351	367	334	152	168	144	105	115	79
ENVIRONMENTAL SCIENTISTS	7,775	7,853	7,867	1,210	1,192	1,150	678	815	821	297	335	306
Atmospheric Scientists	749	712	817	136	114	154	44	50	70	14	10	23
Earth Scientists	5,156	5,214	5,113	832	798	756	398	450	451	183	216	201
Oceanographers	1,343	1,273	1,317	125	119	118	145	211	203	50	37	41
Other Environmental Scientists	527	654	620	117	161	122	91	104	87	50	72	41
MATHEMATICAL AND COMPUTER SCIENTISTS	21,945	23,503	24,590	7,120	10,130	11,450	4,085	4,877	5,303	2,807	3,787	4,296
Mathematicians	16,738	17,044	17,343	4,725	6,302	6,929	3,176	3,522	3,695	2,440	3,075	3,336
Computer Scientists	5,207	6,459	7,247	2,395	3,828	4,521	909	1,355	1,608	367	712	960
LIFE SCIENTISTS	84,054	86,780	87,971	19,018	22,048	23,151	24,101	28,931	30,897	6,529	8,578	9,505
Agricultural Scientists	13,113	13,197	13,468	1,172	1,402	1,192	1,327	1,466	1,569	287	380	370
Biological Scientists	30,497	31,049	31,414	3,804	4,077	4,261	8,217	9,110	9,489	2,285	2,503	2,717
Medical Scientists	38,601	39,926	40,338	13,483	15,634	16,690	11,715	13,159	13,308	3,317	4,268	4,579
Other Life Scientists	1,843	2,608	2,751	559	935	1,008	2,842	5,196	6,531	640	1,427	1,839
PSYCHOLOGISTS	12,415	12,348	12,337	3,844	4,125	4,156	4,318	4,448	4,451	2,680	2,776	2,751
SOCIAL SCIENTISTS	33,325	33,631	33,615	9,400	10,317	10,163	7,829	8,097	7,911	3,528	3,941	3,777
Economists	9,982	10,254	10,341	3,049	3,449	3,459	1,110	1,199	1,213	531	553	537
Political Scientists	7,655	7,894	7,903	1,934	2,112	2,117	1,112	1,279	1,248	493	547	535
Sociologists	7,920	7,734	7,598	2,221	2,333	2,235	2,940	3,028	2,860	1,420	1,543	1,487
Other Social Scientists	7,768	7,749	7,773	2,196	2,423	2,352	2,667	2,591	2,590	1,084	1,298	1,218

SOURCE: Academic Science/Engineering: Scientists and Engineers, January 1983, National Science Foundation

TABLE 5-14

SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY EMPLOYMENT STATUS, TYPE OF INSTITUTION, CONTROL AND SEX, 1983

TYPE OF INSTITUTION AND CONTROL	FULL TIME			PART TIME			% OF ALL WOMEN			% OF ALL MEN		
	Total	Women	% W	Total	Women	% W	Total	Full Time	Part Time	Total	Full Time	Part Time
ALL INSTITUTIONS	272,955	53,080	19.4	85,869	22,452	26.1	100.0	70.3	29.7	100.0	77.6	22.4
Public	90,544	37,044	19.4	55,917	15,424	27.6	69.5	49.0	20.4	68.5	54.2	14.3
Private	82,411	16,036	19.5	29,952	7,028	23.5	30.5	21.2	9.3	31.5	23.4	8.1
INSTITUTIONS GRANTING DOCTORATE IN S/E	191,731	35,507	18.5	44,829	11,048	24.6	61.6	47.0	14.6	67.1	55.1	11.9
Public	132,751	24,770	18.7	26,445	7,458	28.2	42.7	32.8	9.9	44.8	38.1	6.7
Private	58,980	10,737	18.2	18,384	3,590	19.5	19.0	14.2	4.8	22.3	17.0	5.2
MASTER'S IN S/E	29,618	5,704	19.3	10,927	3,069	28.1	11.6	7.6	4.1	11.2	8.4	2.8
Public	22,859	4,271	18.7	6,555	1,865	28.5	8.1	5.7	2.5	8.2	6.6	1.7
Private	6,759	1,433	21.2	4,372	1,204	27.5	3.5	1.9	1.6	3.0	1.9	1.1
BACHELOR'S IN S/E	22,219	4,585	20.6	7,250	2,179	30.1	9.0	6.1	2.9	8.0	6.2	1.8
Public	7,256	1,217	16.8	1,299	375	28.9	2.1	1.6	0.5	2.5	2.1	0.3
Private	14,963	3,368	22.5	5,951	1,804	30.3	6.8	4.5	2.4	5.6	4.1	1.5
OTHER DEGREES	489	38	7.8	121	27	22.3	0.1	0.1	*	0.2	0.2	*
Public	291	9	3.1	45	2	4.4	0.1	*	*	0.1	0.1	*
Private	198	29	14.6	76	25	32.9	*	*	*	0.1	0.1	*
TWO-YR INSTITUTIONS	28,898	7,246	25.1	22,742	6,129	27.0	17.7	9.6	8.1	13.5	7.6	5.9
Public	27,387	6,777	24.7	21,573	5,724	26.5	16.6	9.0	7.6	12.9	7.3	5.6
Private	1,511	469	31.0	1,169	405	34.6	1.2	0.6	0.5	0.6	0.4	0.3

* Less than .1%

SOURCE: Academic Science/Engineering: Scientists and Engineers, January 1983, National Science Foundation

TABLE 5-15

NUMBER AND PERCENT WOMEN AMONG FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT TOP 25* UNIVERSITIES AND COLLEGES, BY FIELD, 1983

INSTITUTION BY RANK	Total S/E Employ.	Total Women	PERCENT WOMEN							
			All S/E Fields	Engr.	Phys. Sci.	Env. Sci.	Math/ Comp. Sci.	Life Sci.	Psy-cho-logy	Soc. Sci.
Harvard	4,457	875	19.6	0.0	7.2	12.0	14.3	20.8	34.9	14.5
Wisconsin, Madison	3,117	744	23.9	8.4	4.1	14.4	10.6	29.7	34.9	27.9
Louisiana State	2,627	669	25.5	1.3	1.5	19.4	20.5	30.5	21.6	17.8
UCLA	2,189	657	30.0	8.0	18.2	14.3	7.6	36.7	26.8	24.7
U. Calif., S.F.	1,449	537	37.1	0.0	0.0	0.0	0.0	37.1	0.0	0.0
Pittsburgh	1,780	520	29.2	5.0	7.0	0.0	15.6	37.9	47.6	20.4
Johns Hopkins	3,329	504	15.1	1.3	6.1	12.1	19.2	24.3	15.2	29.3
Minnesota	2,862	490	17.1	1.6	5.6	10.0	12.9	18.9	22.9	21.5
Utah	1,757	449	25.6	6.0	8.6	9.3	8.4	31.7	12.5	32.8
Yale	1,746	441	25.3	0.0	5.5	4.5	10.2	29.6	52.6	10.1
Cornell	2,451	432	17.6	4.4	9.0	9.4	18.7	20.0	35.5	22.8
Michigan	2,121	431	20.3	8.7	8.3	3.8	6.9	25.9	31.4	26.2
Florida	2,359	431	18.3	1.8	1.0	4.8	6.7	22.4	19.1	16.3
Indiana	1,815	430	23.7	6.7	6.5	3.6	11.6	33.8	19.8	18.2
Columbia	1,770	396	22.4	5.3	8.4	23.0	8.5	27.3	31.3	16.9
U. Washington	1,828	374	20.5	5.7	6.7	16.6	5.2	27.5	30.4	20.6
Wash. U., St. Louis	1,567	352	22.5	1.8	6.9	0.0	14.0	25.7	20.0	8.5
Illinois, Urbana	2,140	343	16.0	4.2	10.0	15.5	18.1	21.2	26.3	17.7
Iowa	1,663	335	20.1	0.0	4.2	0.0	10.6	24.4	24.2	14.0
Ohio State	1,806	331	18.3	5.2	8.6	10.5	10.8	24.6	17.4	17.4
U. Connecticut	1,307	313	23.9	9.4	6.6	9.7	13.5	26.8	28.8	31.0
Rutgers	1,522	313	20.6	6.7	14.3	9.5	13.2	19.9	30.5	30.3
CUNY, Mt. Sinai School of Med.	1,213	293	24.2	0.0	7.1	25.0	10.5	25.5	25.0	19.0
U. Calif., S. Diego	1,329	290	21.8	8.0	12.3	15.5	5.4	28.5	27.3	18.1
Purdue	2,027	286	14.1	3.9	9.5	3.8	17.9	22.3	24.2	11.0
TOTAL, All Schools	272,955	53,080	19.4	3.5	9.5	9.4	17.7	26.0	26.5	19.1

*Ranked in order or number of women scientists/engineers employed.

SOURCE: Academic Science/Engineering: Scientists and Engineers, January 1982, NSF 83-311, National Science Foundation

TABLE 5-16

FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT PUBLIC UNIVERSITIES AND COLLEGES BY FIELD OF SCIENCE AND SEX, 1982

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	187080	35355	20655	674	18677	1678	6860	605	21058	3678	78085	19791	11863	3144	29882	5785
1 UNIV OF WIS-MADISON	3116	751	309	28	202	9	202	35	190	14	1726	514	163	57	324	94
2 UNIVERSITY OF MINNESOTA	3003	518	197	3	166	8	65	5	147	15	1794	350	112	29	522	108
3 LOUISIANA STATE UNIV	2559	596	149	2	130	3	122	32	148	34	1831	495	37	6	142	24
4 UNIVERSITY OF MICHIGAN	2458	587	336	19	274	32	60	4	112	8	1233	381	158	59	285	84
5 TEXAS A & M UNIVERSITY	2279	133	418	7	100	2	78	4	135	11	1078	50	46	9	424	50
6 UNIV OF ILL URBANA	2246	381	387	15	287	29	122	26	183	28	728	136	150	52	389	95
7 UNIVERSITY OF FLORIDA	2205	373	196	2	96	2	12	0	81	7	1652	330	47	12	121	20
8 UNIV OF CAL LOS ANGELES	2094	555	188	14	155	19	102	11	75	6	1234	426	76	13	264	66
9 PENNSYLVANIA STATE UNIV	2071	220	624	18	192	12	84	3	179	35	710	108	76	16	206	28
10 UNIVERSITY OF WASHINGTON	1941	390	275	12	126	1	153	23	79	6	1064	291	50	13	194	44
TOTAL, 1ST 10 INSTS.	23972	4504	3079	120	1728	117	1000	143	1329	164	13050	3081	915	266	2871	613
11 UNIVERSITY OF KENTUCKY	1892	401	159	6	111	15	55	6	157	39	1138	286	65	21	207	28
12 OHIO STATE UNIVERSITY	1884	343	246	7	116	5	42	5	136	11	1042	255	48	9	254	51
13 UNIVERSITY OF UTAH	1784	457	152	10	142	13	55	5	84	7	1186	377	41	5	124	40
14 PURDUE UNIVERSITY	1778	229	457	13	213	12	26	1	178	21	613	138	86	22	205	22
15 UNIVERSITY OF PITTSBURGH	1733	489	156	6	163	9	16	0	118	18	1079	403	65	29	136	24
16 MICHIGAN STATE UNIVERSITY	1701	258	121	0	196	13	35	2	141	16	814	157	113	31	281	39
17 UNIV OF TEXAS AT AUSTIN	1671	323	247	27	407	48	176	38	208	29	222	75	112	27	299	79
18 N C STATE UNIV AT RALEIGH	1622	131	291	11	88	7	30	0	140	16	878	64	21	4	174	29
19 UNIVERSITY OF IOWA	1594	308	72	0	96	1	12	0	74	7	1140	265	35	8	165	27
20 RUTGERS THE ST UNIV OF N.	1564	329	106	4	175	25	52	6	232	31	421	80	126	38	452	145
TOTAL, 1ST 20 INSTS.	41195	7772	5086	204	3435	265	1499	206	2797	359	21583	5181	1627	460	5168	1097
21 UNIV OF CAL DAVIS	1562	285	76	6	66	6	18	0	42	5	1205	227	18	4	137	37
22 UNIV OF CAL BERKELEY	1504	281	305	24	225	22	41	4	81	7	571	146	52	21	229	57
23 INDIANA UNIV-ALL CAMPUSES	1442	310	46	5	171	18	54	3	128	16	721	203	99	18	223	47
24 UNIVERSITY OF COLORADO	1425	202	142	4	193	16	76	5	85	9	675	122	81	19	173	27
25 UNIVERSITY OF ARIZONA	1392	194	150	1	184	4	103	6	103	8	586	120	79	22	187	33
26 UNIVERSITY OF CONNECTICUT	1337	342	139	10	59	4	31	5	72	10	704	202	115	41	217	70
27 UNIV OF CAL SAN FRANCISCO	1332	511	0	0	0	0	0	0	0	0	1332	511	0	0	0	0
28 IOWA ST U OF SCI & TECH	1300	168	349	37	69	5	16	0	140	18	563	89	24	2	139	17
29 UNIVERSITY OF KANSAS	1272	176	148	1	111	6	50	5	93	7	626	109	61	13	183	35
30 UNIV OF CAL SAN DIEGO	1270	274	21	1	143	15	248	36	60	3	680	194	28	7	90	18
TOTAL, 1ST 30 INSTS.	55031	10515	6462	293	4656	361	2136	270	3601	442	29246	7104	2184	607	6746	1438
31 UNIV OF MISSOURI COLUMBIA	1240	226	115	3	49	2	22	1	60	9	838	178	39	8	117	25
32 UNIV OF MD COLLEGE PARK	1207	196	190	9	337	45	24	3	139	20	303	75	44	10	170	34
33 UNIV OF NC AT CHAPEL HILL	1206	185	37	1	78	4	20	0	51	3	829	137	42	10	149	30
34 UNIVERSITY OF GEORGIA	1124	105	28	1	72	2	58	6	81	13	650	47	67	8	168	28
35 UNIVERSITY OF CINCINNATI	1123	183	132	6	69	1	15	1	68	14	719	143	41	6	79	12
36 TEMPLE UNIVERSITY	1120	217	26	1	47	2	18	2	95	12	674	132	97	25	163	43
37 VA POLYTECH INST & ST U	1089	75	309	10	77	2	38	2	118	20	416	26	25	3	106	12
38 WAYNE STATE UNIVERSITY	1088	332	76	19	81	22	7	1	62	17	741	243	36	9	85	21
39 NEW MEXICO STATE UNIV	1071	170	198	5	84	9	20	0	154	28	327	55	125	31	163	42
40 GEORGIA INSTITUTE OF TECH	1055	65	660	28	169	9	36	3	100	13	23	2	17	3	50	7
TOTAL, 1ST 40 INSTS.	66354	12269	8233	376	5719	459	2394	289	4529	591	34766	8142	2717	720	7996	1692
41 SUNY AT STONY BROOK	1052	224	65	1	198	18	50	3	80	11	500	153	50	13	109	25
42 KANS ST U - AG & APP SCI	1050	149	147	3	62	2	11	1	66	3	612	112	16	1	136	27
43 UNIV ALABAMA BIRMINGHAM	1049	162	26	1	30	0	4	0	34	5	897	145	27	7	31	4
44 UNIVERSITY OF VIRGINIA	1047	166	131	4	120	8	41	0	78	11	548	124	34	6	95	13
45 UNIV OF HAWAII-MANOA	1043	210	58	0	87	1	99	11	53	4	524	161	35	7	187	26
46 OREGON STATE UNIVERSITY	1042	111	114	0	77	7	127	2	77	8	558	81	12	3	77	10
47 COLORADO STATE UNIVERSITY	1037	107	165	3	59	2	67	4	85	3	487	70	45	12	129	13
48 UNIV OF SOUTH CAROLINA	1032	252	61	2	98	15	40	1	156	29	382	158	71	13	224	34
49 WEST VIRGINIA UNIVERSITY	1021	194	98	3	33	2	16	1	52	9	350	56	22	7	450	116
50 UNIVERSITY OF NEW MEXICO	952	279	162	16	77	23	31	2	81	13	458	200	35	2	108	23
TOTAL, 1ST 50 INSTS.	76679	14123	9260	409	6560	537	2880	314	5291	687	40082	9402	3064	791	9542	1983
TOTAL, ALL OTHER INSTS.	110401	21232	11395	265	12117	1141	3980	291	15767	2991	38003	10389	8799	2353	20340	3802

SOURCE: Academic Science/Engineering: Scientists and Engineers, January 1982, NSF 83-311, National Science Foundation

TABLE 5-17

FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT PRIVATE UNIVERSITIES AND COLLEGES BY FIELD OF SCIENCE AND SEX, 1982

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	79983	15078	7394	201	9828	990	1708	204	7264	1183	37129	8870	4904	1306	11756	2324
1 HARVARD UNIVERSITY	3956	751	40	1	188	16	54	4	55	6	3444	687	44	18	131	19
2 JOHNS HOPKINS UNIVERSITY	3327	472	955	9	388	19	24	4	200	46	1607	352	30	5	123	37
3 CORNELL UNIVERSITY	2285	407	315	13	203	16	31	3	66	10	1304	266	108	44	258	55
4 YALE UNIVERSITY	1910	450	50	3	149	5	24	1	66	9	1405	386	44	20	172	26
5 MASS INST OF TECHNOLOGY	1896	262	628	38	474	38	107	13	142	11	340	133	20	3	185	26
6 COLUMBIA UNIV MAIN DIV	1766	412	111	8	130	10	190	53	39	2	1035	274	16	4	245	61
7 DUKE UNIVERSITY	1563	299	49	0	72	7	22	5	36	3	1231	256	23	4	130	24
8 UNIV OF PENNSYLVANIA	1546	255	85	6	93	6	4	0	85	8	1017	189	25	3	237	43
9 WASHINGTON UNIVERSITY	1530	323	74	0	74	5	0	0	61	13	1238	294	25	5	58	6
10 NEW YORK UNIVERSITY	1392	293	25	0	75	6	0	0	116	8	948	220	72	24	156	35
TOTAL, 1ST 10 INSTS.	21171	3924	2532	78	1846	128	456	83	866	116	13569	3057	407	130	1695	332
11 UNIVERSITY OF CHICAGO	1320	242	45	1	204	15	41	1	62	1	794	197	44	13	130	14
12 CASE WESTERN RESERVE UNIV	1307	219	117	4	80	3	7	0	36	3	1016	195	13	3	38	11
13 UNIV OF SOUTHERN CAL	1274	196	128	2	85	7	14	0	39	1	877	165	38	6	93	15
14 CUNY MT SINAI SCH OF MED	1192	288	27	0	27	2	4	1	19	2	1091	278	4	1	20	4
15 UNIVERSITY OF ROCHESTER	1129	177	42	2	198	3	7	0	54	3	660	143	82	20	86	6
16 NORTHWESTERN UNIVERSITY	1111	149	159	7	174	16	15	3	103	7	472	89	32	8	156	19
17 STANFORD UNIVERSITY	1102	115	280	10	146	8	35	3	89	4	422	65	28	8	102	17
18 UNIVERSITY OF MIAMI	1074	152	60	1	44	0	88	7	51	6	733	122	36	7	62	9
19 HOWARD UNIVERSITY	979	263	44	0	142	34	48	20	25	2	645	186	17	2	58	19
20 VANDERBILT UNIVERSITY	892	128	56	3	62	2	8	0	47	4	581	101	70	13	68	5
TOTAL, 1ST 20 INSTS.	32551	5853	3290	108	3008	218	723	118	1391	149	20860	4598	771	211	2508	451
21 BOSTON UNIVERSITY	886	263	32	3	76	7	5	0	44	6	556	195	39	16	134	36
22 YESHIVA UNIVERSITY	866	197	5	0	60	12	0	0	8	1	690	151	49	19	54	14
23 GEORGETOWN UNIVERSITY	833	207	0	0	30	1	0	0	15	1	696	188	11	2	81	15
24 EMORY UNIVERSITY	806	133	90	5	81	4	15	1	47	3	447	95	35	11	91	14
25 BAYLOR COL OF MEDICINE	769	138	0	0	0	0	0	0	0	0	769	138	0	0	0	0
26 NORTHEASTERN UNIVERSITY	678	195	153	6	97	14	11	0	59	14	225	126	33	8	100	27
27 NEW YORK MEDICAL COLLEGE	619	149	0	0	0	0	0	0	0	0	619	149	0	0	0	0
28 GEORGE WASHINGTON UNIV	612	122	68	2	37	0	8	0	56	10	316	81	30	11	97	18
29 BRIGHAM YOUNG UNIVERSITY	580	64	86	0	58	0	23	1	128	11	143	39	39	6	103	7
30 CARNEGIE-MELLON UNIV	546	84	175	10	145	21	0	0	86	7	79	32	32	10	29	4
TOTAL, 1ST 30 INSTS.	39746	7405	3899	134	3592	277	785	120	1334	202	25400	5792	1039	294	3197	586
31 TULANE UNIVERSITY	528	78	41	0	31	2	8	2	37	3	311	51	27	7	73	13
32 CALIFORNIA INST OF TECH	528	57	136	3	216	21	56	10	27	1	70	20	0	0	23	2
33 PRINCETON UNIVERSITY	504	62	96	2	132	8	40	7	50	2	52	17	22	4	112	22
34 SYRACUSE UNIVERSITY	498	93	79	2	65	4	9	0	92	16	76	40	34	3	143	28
35 ST LOUIS UNIVERSITY	490	101	9	0	22	1	14	0	26	8	357	76	20	4	42	12
36 LOMA LINDA UNIVERSITY	482	104	54	0	49	12	10	0	28	7	268	77	20	3	53	5
37 WAKE FOREST UNIVERSITY	466	48	2	0	21	0	0	0	19	2	372	33	20	7	32	6
38 ROCKEFELLER UNIVERSITY	413	75	0	0	41	2	0	0	13	0	324	68	35	5	0	0
39 LOYOLA UNIV - CHICAGO	412	63	0	0	29	1	0	0	20	2	274	44	36	4	53	12
40 RENSSELAER POLYTECH INST	391	21	205	3	77	4	9	0	56	7	15	3	10	2	19	2
TOTAL, 1ST 40 INSTS.	44458	8107	4521	144	4275	332	931	139	2202	250	27519	6221	1263	333	3747	688
41 BROWN UNIVERSITY	372	48	53	2	68	8	21	3	61	4	87	17	18	3	64	11
42 UNIVERSITY OF NOTRE DAME	364	28	77	1	114	10	6	0	36	2	50	7	20	2	61	6
43 UNIVERSITY OF DAYTON	350	21	122	0	95	6	6	2	63	3	17	4	21	2	26	4
44 TUFTS UNIVERSITY	344	57	40	3	33	2	3	0	15	0	194	36	18	5	41	11
45 RICE UNIVERSITY	331	41	87	5	82	9	25	1	38	1	53	19	11	2	35	4
46 UNIVERSITY OF DENVER	321	74	33	0	47	3	5	3	58	12	36	18	31	9	111	29
47 THOMAS JEFFERSON UNIV	315	51	7	0	4	1	0	0	1	0	277	41	26	9	0	0
48 DARTMOUTH COLLEGE	313	61	18	0	30	2	12	0	29	2	151	46	21	4	52	7
49 HAHNEMANN MED COL & HOSP	308	39	2	0	9	0	0	0	1	0	272	31	21	7	3	1
50 MARQUETTE UNIVERSITY	307	73	49	2	27	3	0	0	27	2	147	57	12	3	45	6
TOTAL, 1ST 50 INSTS.	47783	8600	5009	157	4784	376	1009	148	2531	276	28803	6497	1462	379	4185	767
TOTAL, ALL OTHER INSTS.	32200	6478	2385	44	5044	614	699	56	4733	907	8326	2373	3442	927	7571	1557

SOURCE: Academic Science/Engineering: Graduate Enrollment and Support, Fall 1982, NSF 84-306, National Science Foundation

TABLE 5-18

SCIENCE/ENGINEERING POSTDOCTORATES AND OTHER NON-FACULTY RESEARCH STAFF IN ALL GRADUATE INSTITUTIONS BY FIELD AND SEX, 1982

FIELD	POSTDOCTORATES			OTHER NON-FACULTY DOCTORAL RESEARCH STAFF		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
TOTAL, ALL FIELDS	19,772	15,293	4,479	4,048	2,195	853
ENGINEERING	983	898	85	671	638	33
AEROSPACE	25	25	0	26	25	1
AGRICULTURAL	4	4	0	3	2	1
BIOMEDICAL	30	24	6	10	9	1
CHEMICAL	175	154	21	96	89	7
CIVIL	108	101	7	115	111	4
ELECTRICAL	178	161	17	74	70	4
ENGINEERING SCIENCE	77	71	6	33	30	3
INDUSTRIAL	9	8	1	27	27	0
MECHANICAL	131	126	5	149	144	5
METALLURGICAL/MATERIALS	168	152	16	89	85	4
MINING	10	10	0	9	9	0
NUCLEAR	18	16	2	19	18	1
PETROLEUM	4	3	1	0	0	0
ENGINEERING, N.E.C.	44	41	3	21	19	2
PHYSICAL SCIENCES	4,297	3,781	516	810	693	117
ASTRONOMY	148	133	15	71	65	6
CHEMISTRY	2,819	2,418	401	348	256	92
PHYSICS	1,328	1,228	100	390	371	19
PHYSICAL SCIENCES, N.E.C.	2	2	0	1	1	0
ENVIRONMENTAL SCIENCES	339	288	51	238	217	21
ATMOSPHERIC SCIENCES	33	30	3	29	28	1
GEOSCIENCES	218	188	30	100	93	7
OCEANOGRAPHY	79	62	17	99	87	12
ENVIRONMENTAL SCIENCES, N.E.C.	9	8	1	10	9	1
MATHEMATICAL/COMPUTER SCIENCES	241	216	25	129	118	11
COMPUTER SCIENCE	58	48	10	80	74	6
MATHEMATICS AND APPLIED MATHEMATICS	169	158	11	29	25	4
STATISTICS	14	10	4	20	19	1
LIFE SCIENCES	13,101	9,633	3,468	1,913	1,343	570
AGRICULTURAL SCIENCES	283	250	33	70	56	14
BIOLOGICAL SCIENCES	7,784	5,571	2,213	1,298	926	370
ANATOMY	280	198	82	43	31	12
BIOCHEMISTRY	1,645	1,191	454	218	151	67
BIOLOGY	961	654	307	298	197	101
BIOMETRY/EPIDEMIOLOGY	53	36	17	15	7	8
BIOPHYSICS	131	105	26	54	44	10
BOTANY	298	209	89	76	57	19
CELL BIOLOGY	487	340	147	38	25	13
ECOLOGY	28	24	4	5	2	3
ENTOMOLOGY/PARASITOLOGY	119	105	14	47	45	2
GENETICS	311	193	118	20	9	11
MICROBIOLOGY	1,043	731	312	103	71	32
NUTRITION	138	99	39	38	26	12
PATHOLOGY	544	362	182	43	33	10
PHARMACOLOGY	796	630	166	90	64	26
PHYSIOLOGY	674	507	167	160	124	36
ZOOLOGY	223	148	75	29	23	6
BIOSCIENCES, N.E.C.	53	39	14	21	19	2
HEALTH SCIENCES	5,034	3,812	1,222	545	359	186
ANESTHESIOLOGY	72	47	25	1	1	0
CANCER/ONCOLOGY	98	71	27	21	11	10
CARDIOLOGY	384	310	74	36	28	8
DENTISTRY	251	208	43	2	2	0
ENDOCRINOLOGY	142	97	45	7	6	1
GASTROENTEROLOGY	124	106	18	10	7	3
HEMATOLOGY	153	111	42	1	1	0
NEUROLOGY	323	247	76	36	29	7
NURSING	0	0	0	8	1	7
OBSTETRICS/GYNECOLOGY	105	73	32	9	2	7
OPHTHALMOLOGY	151	116	35	14	9	5
OTORHINOLARYNGOLOGY	35	32	3	6	3	3
PEDIATRICS	551	366	185	43	27	16
PHARMACEUTICAL SCIENCES	238	185	53	24	18	6
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	152	100	52	33	21	12
PSYCHIATRY	292	178	114	142	81	61
PULMONARY DISEASE	143	123	20	9	8	1
RADIOLOGY	185	150	35	31	21	10
SPEECH PATHOLOGY/AUDIOLOGY	7	3	4	10	7	3
SURGERY	340	306	34	43	37	6
VETERINARY SCIENCES	51	26	25	3	2	1
CLINICAL MEDICINE, N.E.C.	1,132	885	247	55	37	18
HEALTH RELATED, N.E.C.	105	72	33	1	0	1
PSYCHOLOGY	523	304	219	150	89	61
SOCIAL SCIENCES	288	173	115	137	97	40
AGRICULTURAL ECONOMICS	10	9	1	18	15	3
ANTHROPOLOGY	35	14	21	20	7	13
ECONOMICS (EXCEPT AGRICULTURAL)	13	10	3	49	42	7
GEOGRAPHY	5	4	1	3	1	2
HISTORY AND PHILOSOPHY OF SCIENCE	14	7	7	2	2	0
LINGUISTICS	47	28	19	3	0	3
POLITICAL SCIENCE	44	28	16	6	5	1
SOCIOLOGY	89	52	37	23	15	8
SOCIOLOGY/ANTHROPOLOGY	2	1	1	0	0	0
SOCIAL SCIENCES, N.E.C.	29	20	9	13	10	3

SOURCE: Academic Science/Engineering: Graduate Enrollment and Support, Fall 1982, NSF 84-306, National Science Foundation

TABLE 5-19

FULL-TIME SCIENCE & ENGINEERING POSTDOCTORATES IN DOCTORATE-GRANTING INSTITUTIONS, BY CITIZENSHIP, 1979-82

FIELD	U.S. CITIZENS				FOREIGN CITIZENS			
	Number				Number			
	1979	1980	1981	1982	1979	1980	1981	1982
TOTAL, ALL FIELDS	12,032	11,905	12,349	12,405	6,054	6,506	7,297	7,328
ENGINEERING	414	303	331	322	653	676	710	657
AEROSPACE	9	6	8	6	23	14	6	19
AGRICULTURAL	20	4	4	3	5	5	5	3
BIOMEDICAL	22	17	20	24	10	11	14	6
CHEMICAL	65	46	43	42	127	137	128	133
CIVIL	58	60	34	38	70	65	74	70
ELECTRICAL	68	39	104	82	74	82	87	94
ENGINEERING SCIENCE	36	29	37	36	39	50	50	41
INDUSTRIAL	2	8	6	4	5	8	7	5
MECHANICAL	57	43	25	31	86	94	106	100
METALLURGICAL/MATERIALS	41	27	25	28	168	145	168	138
MINING	0	1	5	2	5	2	11	8
NUCLEAR	4	5	4	10	16	17	22	8
PETROLEUM	2	1	0	2	4	5	2	2
ENGINEERING, N.E.C.	30	17	16	14	21	41	30	30
PHYSICAL SCIENCES	2,007	2,103	2,104	1,914	2,013	2,158	2,357	2,366
ASTRONOMY	92	99	95	115	37	42	37	33
CHEMISTRY	1,175	1,195	1,216	1,145	1,429	1,515	1,654	1,661
PHYSICS	738	798	778	652	547	597	666	672
PHYSICAL SCIENCES, N.E.C.	2	11	15	2	0	4	0	0
ENVIRONMENTAL SCIENCES	207	205	213	213	111	102	125	121
ATMOSPHERIC SCIENCES	17	26	24	15	17	17	22	17
GEOSCIENCES	138	124	132	132	81	70	81	84
OCEANOGRAPHY	41	44	48	60	13	13	19	18
ENVIRONMENTAL SCIENCES, N.E.C.	11	11	9	6	0	2	3	2
MATHEMATICAL/COMPUTER SCIENCES	107	100	70	102	93	105	77	138
COMPUTER SCIENCE	57	45	25	44	18	17	23	13
MATHEMATICS AND APPLIED MATHEMATICS	37	45	39	51	65	77	49	118
STATISTICS	13	10	6	7	10	11	5	7
LIFE SCIENCES	8,578	8,457	9,005	9,210	3,049	3,290	3,851	3,880
AGRICULTURAL SCIENCES	141	146	171	165	74	93	113	118
BIOLOGICAL SCIENCES	4,927	4,964	5,286	5,367	1,878	2,094	2,376	2,408
ANATOMY	209	207	200	224	47	43	61	56
BIOCHEMISTRY	997	945	970	1,026	514	603	703	619
BIOLOGY	735	748	639	671	243	262	245	281
BIOMETRY/EPIDEMIOLOGY	64	62	46	39	14	10	18	14
BIOPHYSICS	85	102	86	79	18	52	70	52
BOTANY	111	158	165	202	52	62	75	96
CELL BIOLOGY	239	269	354	338	89	118	152	149
ECOLOGY	15	16	36	26	3	6	8	2
ENTOMOLOGY/PARASITOLOGY	76	92	104	89	28	27	29	30
GENETICS	166	182	212	231	65	69	78	80
MICROBIOLOGY	652	657	706	730	217	222	278	313
NUTRITION	127	76	114	101	43	53	57	37
PATHOLOGY	324	359	347	382	105	118	121	162
PHARMACOLOGY	434	403	507	493	199	221	268	303
PHYSIOLOGY	505	488	574	505	173	180	184	169
ZOOLOGY	168	180	182	189	50	29	39	34
BIOSCIENCES, N.E.C.	30	28	44	42	18	19	10	11
HEALTH SCIENCES	3,510	3,347	3,548	3,678	1,097	1,103	1,362	1,354
ANESTHESIOLOGY	49	33	46	46	13	21	20	26
CANCER/ONCOLOGY	76	105	92	64	34	28	27	34
CARDIOLOGY	237	274	247	294	61	60	86	90
DENTISTRY	84	74	100	200	35	10	43	51
ENDOCRINOLOGY	87	93	102	91	18	27	48	51
GASTROENTEROLOGY	76	107	91	99	27	16	22	25
HEMATOLOGY	135	125	129	126	16	23	24	27
NEUROLOGY	246	277	270	246	81	69	82	77
NURSING	7	9	8	0	0	0	0	0
OBSTETRICS/GYNECOLOGY	78	74	51	57	65	48	62	48
OPHTHALMOLOGY	120	89	107	109	18	33	37	42
OTORHINOLARYNGOLOGY	26	32	24	19	9	14	17	16
PEDIATRICS	418	358	478	443	93	75	109	108
PHARMACEUTICAL SCIENCES	110	62	93	87	125	171	150	151
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	88	134	103	129	24	27	32	23
PSYCHIATRY	267	266	264	251	27	30	28	41
PULMONARY DISEASE	121	120	112	119	21	7	10	24
RADIOLOGY	91	104	89	114	47	52	66	71
SPEECH PATHOLOGY/AUDIOLOGY	34	16	14	6	1	0	2	1
SURGERY	184	183	166	194	97	125	141	146
VETERINARY SCIENCES	16	42	22	41	4	10	9	8
CLINICAL MEDICINE, N.E.C.	892	707	863	858	253	217	314	274
HEALTH RELATED, N.E.C.	69	61	77	85	24	40	33	20
PSYCHOLOGY	420	444	417	458	34	30	54	65
SOCIAL SCIENCES	299	293	209	186	101	145	123	101
AGRICULTURAL ECONOMICS	2	6	5	4	4	2	1	6
ANTHROPOLOGY	34	37	26	31	7	3	4	3
ECONOMICS (EXCEPT AGRICULTURAL)	51	94	19	4	48	52	11	9
GEOGRAPHY	2	4	7	1	3	11	16	4
HISTORY AND PHILOSOPHY OF SCIENCE	7	7	13	8	4	8	8	6
LINGUISTICS	10	22	20	21	20	32	27	26
POLITICAL SCIENCE	25	19	22	26	4	11	24	18
SOCIOLOGY	106	84	79	72	9	15	11	17
SOCIOLOGY/ANTHROPOLOGY	4	3	0	1	0	0	0	1
SOCIAL SCIENCES, N.E.C.	58	17	18	18	2	11	21	11

SOURCE: National Center for Education Statistics, Preliminary Releases, and unpublished data

TABLE 5-20

WOMEN AS A PERCENT OF TOTAL FULL-TIME INSTRUCTIONAL FACULTY ON 9-MONTH CONTRACTS IN INSTITUTIONS OF HIGHER EDUCATION BY ACADEMIC RANK AND LEVEL OF INSTITUTIONAL UNIT, 1972-73 - 1982-83

ACADEMIC RANK AND YEAR	All Institutions	PUBLIC				PRIVATE			
		Total	Univ.	4-Yr. Inst.	2-Yr. Inst.	Total	Univ.	4-Yr. Inst.	2-Yr. Inst.
ALL RANKS									
1972-73	22.3	22.7	17.1	23.2	32.3	21.2	14.5	23.6	45.4
1974-75	24.1	24.8	19.3	24.4	32.7	23.5	16.3	25.6	44.1
1976-77	25.2	25.7	18.9	24.6	34.4	23.7	17.0	26.0	42.4
1979-80	25.9	26.4	20.0	26.4	34.7	24.8	18.2	27.4	48.6
1980-81	26.7	26.9	19.5	25.8	35.9	26.1	19.0	28.4	47.1
1981-82	27.1	27.3	19.9	26.2	36.4	26.2	19.2	28.6	46.9
1982-83*	26.9	27.1	19.0	26.4	36.6	26.6	20.2	28.0	45.2
PROFESSORS									
1972-73	9.8	10.0	6.7	12.7	21.2	9.5	5.4	12.3	31.5
1974-75	10.3	10.5	6.6	12.7	24.7	10.1	5.6	13.0	26.6
1976-77	9.6	9.7	6.2	11.8	20.8	9.2	5.6	12.0	26.4
1979-80	9.8	9.7	6.4	11.8	23.5	10.1	6.0	12.7	29.6
1980-81	10.6	10.6	6.2	12.3	22.9	10.6	6.5	13.4	28.9
1981-82	10.8	10.8	6.4	12.5	23.0	10.7	6.6	13.3	29.7
1982-83*	10.7	10.7	6.3	12.7	23.6	10.6	7.0	12.6	32.9
ASSOCIATE PROFESSORS									
1972-73	16.3	15.8	12.3	17.4	24.3	17.2	12.9	19.1	34.3
1974-75	16.9	16.1	13.3	17.0	24.7	18.6	13.5	20.8	26.6
1976-77	17.6	17.3	13.8	17.7	26.6	18.3	14.4	20.0	28.5
1979-80	19.4	19.1	16.2	18.9	29.4	20.3	16.6	21.6	42.7
1980-81	20.6	20.4	16.7	20.3	29.8	21.1	17.6	22.4	42.3
1981-82	21.5	21.3	17.6	21.0	31.7	21.9	18.8	23.0	40.7
1982-83*	22.0	21.9	17.9	22.0	33.0	22.3	19.4	23.3	35.8
ASSISTANT PROFESSORS									
1972-73	23.8	23.7	20.0	24.7	31.3	24.1	19.0	25.7	41.3
1974-75	27.1	27.0	24.4	27.6	33.8	27.3	22.4	28.7	43.2
1976-77	30.3	30.4	27.6	30.7	35.8	30.1	26.2	31.4	46.0
1979-80	33.9	33.8	31.1	34.5	38.6	34.2	30.0	35.4	52.9
1980-81	35.3	35.2	31.3	35.9	40.3	35.4	30.7	37.2	51.2
1981-82	35.9	35.8	31.8	36.8	40.9	36.1	30.9	40.0	51.3
1982-83*	36.1	35.9	30.7	37.7	41.6	36.5	32.2	37.9	49.8
INSTRUCTORS									
1972-73	39.9	39.2	44.4	44.0	35.1	42.5	41.0	41.5	53.8
1974-75	40.6	39.4	49.6	47.7	34.2	46.5	44.8	46.2	51.0
1976-77	50.6	61.1	53.8	51.5	48.1	49.5	48.6	49.0	59.4
1979-80	51.8	52.1	55.7	52.7	47.7	51.0	48.6	51.0	57.4
1980-81	52.8	58.3	56.0	53.7	50.7	51.5	49.6	51.6	56.3
1981-82	53.3	54.3	56.6	54.7	52.1	51.2	47.2	51.5	59.1
1982-83*	51.7	52.2	54.6	52.1	50.8	50.6	50.6	50.1	56.9
LECTURERS									
1972-73	34.9	35.1	30.3	40.2	51.2	34.2	29.1	38.1	52.9
1974-75	39.8	39.5	36.3	43.8	50.0	40.5	35.9	46.2	91.7
1976-77	40.8	41.1	40.9	39.7	54.6	39.6	36.3	43.6	87.5
1979-80	44.7	45.3	44.4	46.4	46.1	45.2	42.1	49.9	-
1980-81	46.5	46.2	45.8	45.2	54.8	47.3	46.1	46.9	90.0
1981-82	47.1	47.4	47.3	46.2	55.9	45.7	47.3	43.3	70.0
1982-83*	47.5	47.4	46.1	47.2	57.7	47.7	48.5	46.4	55.6
NO ACADEMIC RANK									
1972-73	32.8	32.3	23.4	38.8	32.4	34.7	10.0	30.1	40.6
1974-75	34.3	34.0	39.1	39.9	33.7	35.5	10.0	30.8	44.5
1976-77	34.8	34.5	53.1	46.5	34.2	37.6	42.7	35.1	40.2
1979-80	34.3	33.8	38.6	33.3	33.8	42.4	40.8	36.9	48.8
1980-81	36.1	35.7	40.3	36.0	35.7	40.4	40.1	33.3	46.7
1981-82	36.4	36.1	43.2	39.8	36.0	39.8	42.2	33.4	46.2
1982-83*	36.5	36.2	37.3	36.3	36.2	38.7	45.5	31.4	44.6

* Includes both 9- and 12-month contracts.

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 5-21

Teachers, Counselors and Administrators by Educational Level, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
EDUCATION	4359269	1490879	1323354	91726	5683	26805	1731	41580	2868390	2438220	302013	11847	32937	1902	81471
	100.00%	34.20%	30.36%	2.10%	0.13%	0.61%	0.04%	0.95%	65.80%	55.93%	6.93%	0.27%	0.76%	0.04%	1.87%
Teachers, Elementary & Secondary	3363514	950590	842201	67854	3765	8758	810	27162	2412924	2036833	271570	10096	24329	1439	68657
	100.00%	28.26%	25.04%	2.02%	0.11%	0.26%	0.02%	0.81%	71.74%	60.56%	8.07%	0.30%	0.72%	0.04%	2.04%
Prekindergarten & Kindergarten	183338	6564	4687	1273	79	157	5	363	176774	142126	24171	1099	1673	173	7532
	100.00%	3.58%	2.56%	0.69%	0.04%	0.09%	0.00%	0.20%	96.42%	77.52%	13.18%	0.60%	0.91%	0.09%	4.11%
Elementary School	2319370	569823	497935	45830	2207	5627	563	17661	1749547	1471072	203147	7190	18451	919	48768
	100.00%	24.57%	21.47%	1.98%	0.10%	0.24%	0.02%	0.76%	75.43%	63.43%	8.76%	0.31%	0.80%	0.04%	2.10%
Secondary School	860806	374203	339579	20751	1479	3014	242	9138	486603	423635	44252	1807	4205	347	12357
	100.00%	43.47%	39.45%	2.41%	0.17%	0.35%	0.03%	1.06%	56.53%	49.21%	5.14%	0.21%	0.49%	0.04%	1.44%
Teachers, Postsecondary	895755	540289	481153	23872	1918	18007	921	14418	455466	401387	30443	1751	8608	483	12814
	100.00%	54.26%	48.32%	2.40%	0.19%	1.81%	0.09%	1.45%	45.74%	40.31%	3.06%	0.18%	0.86%	0.05%	1.29%
Counselors, Educational & Vocational	198256	90587	73447	10607	1059	1219	93	4162	107669	83405	17183	1379	1395	99	4208
	100.00%	45.69%	37.05%	5.35%	0.53%	0.61%	0.05%	2.10%	54.31%	42.07%	8.67%	0.70%	0.70%	0.05%	2.12%
Education & Related Fields, Administrators	387528	239766	210678	20154	945	1718	158	6113	147772	121224	19193	1050	1532	101	4672
	100.00%	61.87%	54.36%	5.20%	0.24%	0.44%	0.04%	1.58%	38.13%	31.28%	4.95%	0.27%	0.40%	0.03%	1.21%
Teacher's Aides	215709	16163	9983	3132	323	765	37	1923	199546	138177	33906	2435	2053	147	22828
	100.00%	7.49%	4.63%	1.45%	0.15%	0.35%	0.02%	0.89%	92.51%	64.06%	15.72%	1.13%	0.95%	0.07%	10.58%

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 5-22

Post-Secondary Teachers by Field, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Teachers, Postsecondary	995755	540289	481153	23872	1818	18007	921	14418	455466	401387	30443	1751	8608	463	12814
	100.00%	54.26%	48.32%	2.40%	0.19%	1.81%	0.09%	1.45%	45.74%	40.31%	3.06%	0.18%	0.86%	0.05%	1.29%
Agriculture/Forestry	3813	3248	3009	122	18	41	18	38	567	521	37	0	2	0	7
	100.00%	85.13%	78.91%	3.20%	0.47%	1.08%	0.47%	1.00%	14.87%	13.66%	0.97%	0.00%	0.05%	0.00%	0.18%
Art/Drama/Music	28385	14718	13448	773	64	135	12	286	13667	12458	673	54	272	16	194
	100.00%	51.85%	47.38%	2.72%	0.23%	0.48%	0.04%	1.01%	48.15%	43.89%	2.37%	0.19%	0.96%	0.06%	0.68%
Biological Science	9651	6537	6095	122	8	230	7	75	3114	2782	171	13	113	5	30
	100.00%	67.73%	63.15%	1.26%	0.08%	2.38%	0.07%	0.78%	32.27%	28.83%	1.77%	0.13%	1.17%	0.05%	0.31%
Business/Commerce/ Marketing	7616	4022	3651	169	20	117	7	58	3594	3180	259	10	45	0	100
	100.00%	52.81%	47.94%	2.22%	0.26%	1.54%	0.09%	0.76%	47.19%	41.75%	3.40%	0.13%	0.59%	0.00%	1.31%
Chemistry	8382	6671	6040	148	15	351	0	117	1711	1531	58	0	83	0	39
	100.00%	79.59%	72.06%	1.77%	0.18%	4.19%	0.00%	1.40%	20.41%	18.27%	0.69%	0.00%	0.99%	0.00%	0.47%
Computer Science	2558	1842	1519	68	7	170	6	72	716	615	54	0	20	0	27
	100.00%	72.01%	59.38%	2.66%	0.27%	6.65%	0.23%	2.81%	27.99%	24.04%	2.11%	0.00%	0.78%	0.00%	1.06%
Earth/Environmental/ Marine	2274	1904	1827	10	5	38	12	12	370	342	0	0	9	0	19
	100.00%	83.73%	80.34%	0.44%	0.22%	1.67%	0.53%	0.53%	16.27%	15.04%	0.00%	0.00%	0.40%	0.00%	0.84%
Economics	5032	4024	3681	103	0	172	13	55	1008	872	43	0	54	0	39
	100.00%	79.97%	73.15%	2.05%	0.00%	3.42%	0.26%	1.09%	20.03%	17.33%	0.85%	0.00%	1.07%	0.00%	0.78%
Education	2308	1373	1207	121	6	9	6	24	935	807	90	0	32	0	6
	100.00%	59.49%	52.30%	5.24%	0.26%	0.39%	0.26%	1.04%	40.51%	34.97%	3.90%	0.00%	1.39%	0.00%	0.26%
Engineering	10972	9719	8670	317	38	487	6	201	1253	1115	70	0	36	7	25
	100.00%	88.58%	79.02%	2.89%	0.35%	4.44%	0.05%	1.83%	11.42%	10.16%	0.64%	0.00%	0.33%	0.06%	0.23%
English	23403	10538	9740	302	8	192	28	268	12865	11664	700	45	148	22	286
	100.00%	45.03%	41.62%	1.29%	0.03%	0.82%	0.12%	1.15%	54.97%	49.84%	2.99%	0.19%	0.63%	0.09%	1.22%
Foreign Language	9954	4039	3331	56	6	184	11	451	5915	4689	129	3	254	23	817
	100.00%	40.58%	33.46%	0.56%	0.06%	1.85%	0.11%	4.53%	59.42%	47.11%	1.30%	0.03%	2.55%	0.23%	8.21%
Health Specialties	19551	2596	2360	139	12	51	0	34	16955	15159	1093	61	303	6	333
	100.00%	13.28%	12.07%	0.71%	0.06%	0.26%	0.00%	0.17%	86.72%	77.54%	5.59%	0.31%	1.55%	0.03%	1.70%
History	5600	4267	4002	126	0	61	0	78	1333	1224	84	0	20	0	5
	100.00%	76.20%	71.46%	2.25%	0.00%	1.09%	0.00%	1.39%	23.80%	21.86%	1.50%	0.00%	0.36%	0.00%	0.09%
Home Economics	1987	163	150	5	0	8	0	0	1824	1655	112	1	13	0	43
	100.00%	8.20%	7.55%	0.25%	0.00%	0.40%	0.00%	0.00%	91.80%	83.29%	5.64%	0.05%	0.65%	0.00%	2.16%

TABLE 5-22 (continued)

Post-Secondary Teachers by Field, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Teachers, Postsecondary Continued															
Law	4112 100.00%	3301 80.28%	3125 76.00%	104 2.53%	0 0.00%	19 0.46%	4 0.10%	49 1.19%	811 19.72%	711 17.29%	78 1.90%	0 0.00%	6 0.15%	0 0.00%	16 0.39%
Mathematical Sciences	16697 100.00%	11390 68.22%	10004 59.91%	496 2.97%	58 0.35%	507 3.04%	14 0.08%	311 1.86%	5307 31.78%	4555 27.28%	438 2.62%	7 0.04%	221 1.32%	5 0.03%	81 0.49%
Medical Science	9014 100.00%	6891 76.45%	6141 68.13%	175 1.94%	0 0.00%	315 3.54%	31 0.34%	225 2.50%	2123 23.55%	1939 21.51%	81 0.90%	0 0.00%	45 0.50%	7 0.08%	51 0.57%
Natural Sciences, Misc.	831 100.00%	637 76.65%	588 70.76%	6 0.72%	0 0.00%	19 2.29%	0 0.00%	24 2.89%	194 23.35%	184 22.14%	10 1.20%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Physical Education	9008 100.00%	5382 59.75%	4722 52.42%	432 4.80%	26 0.29%	69 0.77%	0 0.00%	133 1.48%	3626 40.25%	3319 36.85%	194 2.15%	20 0.22%	35 0.39%	8 0.09%	50 0.56%
Physics	5414 100.00%	4882 90.17%	4363 80.59%	65 1.20%	6 0.11%	303 5.60%	12 0.22%	133 2.46%	532 9.83%	452 8.35%	16 0.30%	0 0.00%	38 0.70%	4 0.07%	22 0.41%
Political Science	2086 100.00%	1677 81.67%	1451 70.23%	110 5.32%	6 0.29%	78 3.78%	13 0.63%	19 0.92%	389 18.83%	375 18.15%	0 0.00%	0 0.00%	10 0.48%	0 0.00%	4 0.19%
Psychology	5820 100.00%	3494 60.03%	3244 55.74%	123 2.11%	29 0.50%	53 0.91%	0 0.00%	45 0.77%	2326 39.97%	2047 35.17%	153 2.63%	0 0.00%	47 0.81%	0 0.00%	79 1.36%
Social Sciences, Misc.	2009 100.00%	1301 64.76%	1192 59.33%	23 1.14%	16 0.80%	27 1.34%	11 0.55%	32 1.59%	708 35.24%	642 31.96%	12 0.60%	6 0.30%	6 0.30%	0 0.00%	42 2.09%
Social Work	810 100.00%	329 40.62%	306 37.78%	12 1.48%	0 0.00%	0 0.00%	0 0.00%	11 1.36%	481 59.38%	318 39.26%	105 12.96%	0 0.00%	23 2.84%	0 0.00%	35 4.32%
Sociology	3207 100.00%	2263 70.56%	2018 62.86%	129 4.02%	10 0.31%	62 1.93%	13 0.41%	33 1.03%	944 29.44%	816 25.44%	87 2.71%	0 0.00%	18 0.56%	0 0.00%	23 0.72%
Special Education	32818 100.00%	10138 30.89%	8982 27.37%	693 2.11%	68 0.21%	118 0.36%	8 0.02%	269 0.82%	22680 69.11%	19646 59.86%	2364 7.20%	107 0.33%	129 0.39%	12 0.04%	422 1.29%
Theology	3578 100.00%	2809 78.55%	2664 74.50%	64 1.79%	0 0.00%	46 1.29%	0 0.00%	35 0.98%	767 21.45%	704 19.69%	25 0.70%	8 0.22%	12 0.34%	0 0.00%	18 0.50%
Trade/Industrial	3595 100.00%	2490 89.26%	2221 81.78%	183 5.09%	8 0.22%	38 1.00%	5 0.14%	37 1.03%	1105 30.74%	993 27.62%	95 2.64%	0 0.00%	0 0.00%	0 0.00%	17 0.47%
Miscellaneous Post-secondary Teachers	755292 100.00%	407646 53.97%	361404 47.85%	18676 2.47%	1484 0.20%	14105 1.87%	684 0.09%	11293 1.50%	347646 46.03%	306072 40.52%	23212 3.07%	1416 0.19%	6614 0.88%	348 0.05%	9984 1.32%

SOURCE: Digest of Education Statistics, Series 1973 through 1983-84 editions, National Center of Education Statistics

TABLE 5-23

HISTORICAL SUMMARY OF U.S. FACULTY* IN HIGHER EDUCATION BY SEX, 1869-70 TO 1980-81

YEAR	Total Institutions	Total Faculty	Men	Women	%W
1869-1870	563	5,553**	4,887**	666**	12.0
1879-1880	811	11,522**	7,328**	4,194**	36.4
1889-1890	998	15,809**	12,704**	3,105**	19.6
1899-1900	977	23,868	19,151	4,717	19.8
1909-1910	951	36,480	29,132	7,348	20.1
1919-1920	1,041	48,615	35,807	12,808	26.4
1929-1930	1,409	82,386	60,017	22,369	27.2
1939-1940	1,708	146,929	106,328	40,601	27.6
1949-1950	1,851	246,722	186,189	60,533	24.5
1959-1960	2,008	380,554	296,773	83,781	22.0
1969-1970	2,525	825,000	619,000	206,000	25.0
1971-1972	2,720	881,665	639,251	242,414	27.5
1976-1977	2,785	1,073,119	729,169	343,950	32.0
1977-1978**	2,826	1,090,000	740,000	350,000	32.1
1978-1979	3,134	1,097,000	732,000	365,000	33.3
1979-1980	3,152	1,127,000**	751,000**	376,000**	33.3
1980-1981	3,231	1,179,000**	784,000**	395,000**	33.5

* All individuals, not reduced to full-time equivalents ** Estimated

SOURCE: 1980 Fact Book for Academic Administrators, American Council on Education and Digest of Education - Statistics, 1981, National Center for Education Statistics and Profile of Women's College Presidents, Women's College Coalition; and American Council on Education, Office of Women in Higher Education, December; 1984

TABLE 5-24

WOMEN COLLEGE PRESIDENTS BY TYPE AND CONTROL OF INSTITUTION, 1975-1983

YEAR AND TYPE OF INSTITUTION		All Institutions Headed by Women		Public Institutions Headed by Women		Private Institutions Headed by Women		Women's Colleges* Headed by Women		Memb of Religious Orders
		No.	%†	No.	%†	No.	%†	No.	%†	No.
1975	Total	148	4.8	16	1.1	132	8.2	na	na	105
	Four-Year	103	5.4	5	0.9	98	7.2	na	na	79
	Two-Year	45	3.9	11	1.2	34	14.2	na	na	26
1976	Total	154	5.0	16	1.1	138	8.6	71	56.8	na
	Four-Year	110	5.7	3	0.5	107	7.8	57	58.8	na
	Two-Year	44	3.8	13	1.4	31	13.0	14	50.0	na
1977	Total	156	5.0	19	1.3	137	8.3	87	71.3	na
	Four-Year	112	5.7	5	0.9	107	7.7	72	75.0	na
	Two-Year	44	3.7	14	1.5	30	12.0	15	57.7	na
1978	Total	177	5.6	31	2.1	146	8.7	75	64.1	na
	Four-Year	123	6.3	9	1.6	114	8.1	62	66.7	na
	Two-Year	54	4.5	22	2.4	32	11.3	13	54.2	na
1980	Total	219	6.9	62	4.2	157	9.4	78	67.8	na
	Four-Year	145	7.4	21	3.8	124	8.8	60	67.4	na
	Two-Year	64	5.4	41	4.4	33	12.3	18	18.3	na
1981	Total	231	7.2	72	4.8	159	9.2	80	70.2	98
	Four-Year	162	8.3	25	4.5	135	9.5	61	68.5	86
	Two-Year	69	5.4	47	4.9	24	7.1	19	19.4	12
1982	Total	244	7.5	78	5.2	166	9.5	84	73.7	99
	Four-Year	152	8.1	25	4.5	127	8.9	62	69.7	73
	Two-Year	92	7.2	53	5.6	39	11.6	22	22.4	26
1983	Total	254	7.8	85	5.7	169	9.6	85	74.6	97
	Four-Year	152	7.7	28	5.0	124	8.7	na	na	
	Two-Year	102	8.0	57	6.1	45	13.4	na	na	

na Not available in source.

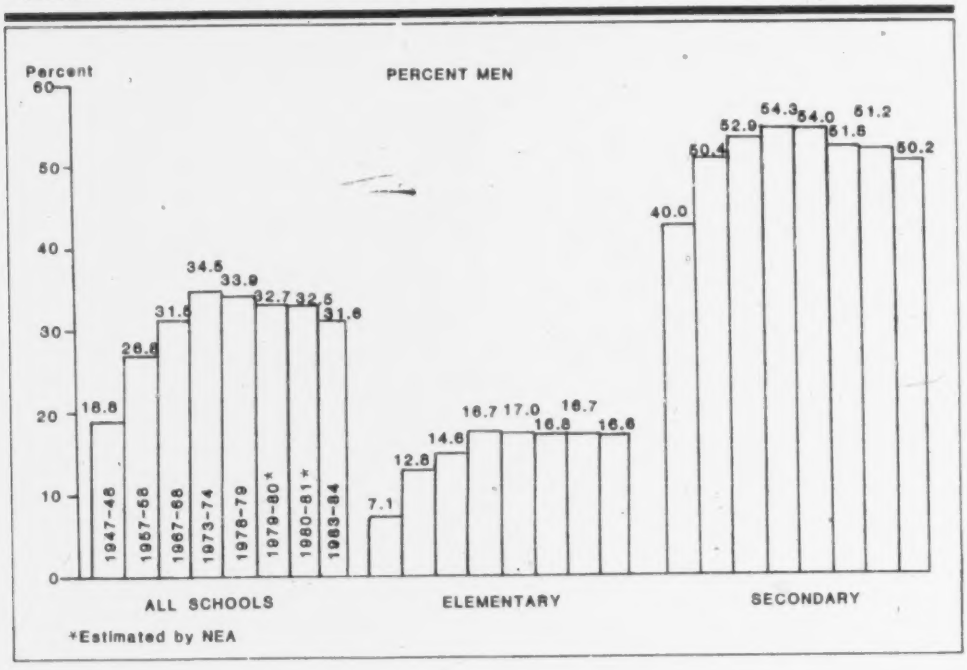
* Institutions with enrollment of at least 90 percent women.

† Institutions headed by women as a percentage of all institutions of the type indicated. Annual directories published by NCES are the source of data concerning the "universe" of institutions by type and control.

SOURCE: Digest of Education Statistics, 1981, National Center for Education Statistics; Estimates of School Statistics, 1980-81, National Education Association; and personal communication with NEA

TABLE 5-25

MEN AS A PERCENT OF ALL CLASSROOM TEACHERS, SELECTED YEARS 1948-1984



SOURCE: Fact Sheet on Women in Educational Administration compiled by Suzanne Howard, September 1980 and Digest of Education Statistics, 1982 and Personal Communication with the National Education Association, June 1984

TABLE 5-26

WOMEN AS A PERCENT OF TOTAL STAFF IN ELEMENTARY AND SECONDARY EDUCATION

	YEAR OF DATA												
	1928	1948	1965	1968	1974	1976	1977	1978	1979	1980	1981	1983	1984
Teachers													
Elementary		93.0		85.0	83.0	87.0		83.0		83.0	83.1	83.4	83.4
Secondary		60.0		47.0		48.0		46.0		48.0	48.9	49.4	49.8
Principals													
Elementary	55.0	41.0			13.0			18.0					
Secondary			10.0				7.0						

SOURCE: The Condition of Education, 1982 Edition, NCES

TABLE 5-27

PERCENTAGE DISTRIBUTION OF FULL-TIME TEACHERS IN PUBLIC SCHOOLS, 1979

LEVEL	WHITE	BLACK	HISPANIC	ASIAN	AM. INDIAN
Elementary	85.8	10.9	2.3	0.6	0.2
Secondary	88.9	8.6	1.8	0.4	0.2

SOURCE: Weiss, Iris R., Report of the 1977 National Survey of Science, Mathematics, and Social Studies Education, p. 141, National Science Foundation, SE-78-72, reprinted from Science and Engineering Education: Data and Information, NSF-82-30

TABLE 5-28

PERCENT OF MALE AND FEMALE TEACHERS OF SCIENCE, MATHEMATICS, AND SOCIAL STUDIES, BY GRADE RANGE

Grade Range	*Mathematics*			*Science*			*Social Studies*			*Total*		
	Male	Female	Unknown	Male	Female	Unknown	Male	Female	Unknown	Male	Female	Unknown
K-3 (N = 838)	6	94	0	2	98	0	3	96	1	4	96	0
4-6 (N = 829)	21	76	2	33	67	0	19	79	1	25	74	1
7-9 (N = 1538)	54	46	0	62	38	0	62	38	0	59	41	0
10-12 (N = 1624)	68	32	0	74	24	2	75	24	1	73	26	1
Sample N		1672			1679			1478			4829	

SOURCE: Digest of Education Statistics, 1983-84, National Center for Education Statistics, NCES 83-407

TABLE 5-29

NUMBER AND EMPLOYMENT STATUS OF STAFF MEMBERS IN NONCOLLEGIATE POSTSECONDARY SCHOOLS OFFERING OCCUPATIONAL PROGRAMS, BY TYPE AND CONTROL, 1980-81

Type and control of school	Total staff		Instructional staff		Other professional staff		Nonprofessional staff	
	Number	Percent female	Number	Percent female	Number	Percent female	Number	Percent female
1	2	3	4	5	6	7	8	9
Total	**104,389**	**52.3**	**70,470**	**47.8**	**17,405**	**50.1**	**16,494**	**74.0**
Vocational/technical	37,824	39.3	26,350	33.6	4,487	31.7	6,987	65.7
Technical institute	4,215	31.5	2,659	16.6	858	40.1	699	77.5
Business/office	20,018	58.6	12,800	53.2	4,186	60.2	3,032	79.9
Cosmetology/barber	12,107	76.1	9,150	76.3	1,811	69.4	1,146	85.1
Flight	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Trade	9,491	28.5	5,629	16.9	2,217	28.8	1,645	67.4
Arts/design	3,777	38.5	2,649	33.7	694	47.3	435	54.0
Hospital	11,654	83.0	7,814	82.3	2,083	75.9	1,777	94.4
Allied health	5,282	70.0	3,420	69.0	1,088	60.0	773	85.4
Other	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Public	**38,510**	**42.0**	**26,558**	**37.2**	**3,515**	**30.5**	**8,437**	**67.9**
Vocational/technical	33,631	39.2	24,409	34.1	3,228	28.0	5,993	65.9
Technical institute	728	54.9	560	50.0	96	50.0	72	100.0
Business/office	27	30.0	13	15.2	13	46.6	1	0.0
Cosmetology/barber	12	100.0	12	100.0	0	0.0	0	0.0
Flight	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Trade	119	18.5	93	15.1	14	28.6	12	33.3
Arts/design	47	57.4	36	50.0	9	77.8	2	100.0
Hospital	1,370	84.5	986	82.9	91	68.2	293	95.2
Allied health	577	91.2	450	94.4	64	59.5	64	100.0
Other	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Private proprietary	**53,466**	**54.2**	**34,968**	**50.4**	**10,872**	**51.6**	**7,626**	**75.4**
Vocational/technical	2,727	32.8	1,400	20.3	761	32.5	566	84.3
Technical institute	3,310	26.8	1,982	8.1	741	39.4	588	74.0
Business/office	18,876	58.5	12,195	53.5	3,849	59.4	2,832	78.8
Cosmetology/barber	12,036	76.1	9,121	76.3	1,783	69.2	1,133	85.5
Flight	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Trade	8,671	28.6	5,103	17.3	2,056	28.4	1,512	66.9
Arts/design	3,280	38.0	2,263	33.0	623	46.4	394	53.8
Hospital	830	76.8	512	74.4	212	69.8	106	100.0
Allied health	3,736	70.8	2,393	70.7	848	61.9	495	84.6
Other	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Private nonprofit	**14,393**	**71.8**	**8,944**	**69.4**	**3,018**	**67.8**	**2,431**	**85.9**
Vocational/technical	1,466	53.8	541	45.1	498	54.0	428	64.0
Technical institute	177	22.6	117	1.7	21	3.2	39	87.2
Business/office	1,116	62.3	592	47.3	324	69.8	200	94.5
Cosmetology/barber	59	66.1	17	64.7	28	78.6	14	50.0
Flight	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Trade	701	28.8	433	13.9	148	33.8	120	77.5
Arts/design	450	40.2	349	37.0	62	51.6	39	53.8
Hospital	9,454	83.4	6,316	82.9	1,760	72.0	1,377	93.8
Allied health	969	53.0	577	42.6	177	50.8	215	82.8
Other	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)

(1) Data not available.

NOTE.—Because of rounding, details may not add to totals.

CHAPTER 6

PHYSICAL, MATHEMATICAL, AND COMPUTER SCIENCES

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FIELD: Physical Sciences and Mathematics

SOURCE: Tables throughout Professional Women and Minorities

TABLE 6-1

PROPORTIONS OF WOMEN IN THE PHYSICAL AND MATHEMATICAL SCIENCES, SUMMARY TABLE

	CHEMISTRY		PHYSICS		ASTRONOMY		GEOSCIENCES		COMPUTER SCI.		MATHEMATICS		STATISTICS	
	1960-77	1982	1960-77	1982	1960-77	1982	1960-77	1982	1965-77	1982	1960-77	1982	1960-77	1982
Degrees Granted														
Bachelor's	19.6	31.6	6.4	13.2	15.2	19.8	12.7	26.4	16.4	34.8	36.6	43.2	21.7	41.1
Master's	20.0	28.1	5.8	12.1	12.1	16.4	9.5	22.7	11.4	26.5	26.2	33.9	18.0	30.3
Ph.D.'s (1983)	8.1	16.9	2.8	7.1	7.6	21.2	3.7	15.2	5.8	12.6	7.8	16.1	8.0	17.9
	1972	1983	1972	1982			1970	1983	1970	1983	1970	1983	1970	1982
General Labor Force	13.3	23.3	4.1	5.8			7.1	18.0	11.1	27.8	11.4	29.6	11.4	57.9
	1970	1983	1971	1983	1973		1973	1983	1970	1983	1970	1983	1970	1981
Doctoral Labor Force	6.5	7.8	1.7	3.1	9.6		2.8	5.7	6.9	8.0	6.5	8.6	5.4	11.2
Academic Labor Force	1970-71	1982-83	1971-72	1982-83	1972-73	1982-83	1964-65	1982-83	1970	1982-83	1975-76	1983-84	1970	1978
Total	1.5	13.2	3.2	4.6	4.6	7.7	1.2	9.4	12.2	18.2	9.2	10.6	9.4	18.2
Professor*		4.3	2.4	1.1	2.4	4.0	1.0	1.0		2.4	4.3	4.6		3.0
Assoc. Professor*		8.3	2.7	2.5	2.7	2.0	0.7	1.5		2.2	6.4	9.6		4.1
Asst. Professor*		12.3	3.3	5.3	3.3	11.0	1.7	7.9		11.9	12.4	17.2		13.6
	1972	1982	1972	1982	1972	1982	1972	1982	1972	1982	1970	1982	1970	1982
Federal Labor Force	14.9	20.1	2.3	4.0	3.6	5.4	3.7	9.6	19.0	23.3	9.0	23.8	13.3	29.4

*1981

TABLE 6-2

PROPORTION OF MINORITIES IN THE PHYSICAL AND MATHEMATICAL SCIENCES, SUMMARY TABLE

	BLACK		HISPANIC		AMERICAN INDIAN		ASIAN	
	1975-76	1982	1975-76	1982	1975-76	1982	1975-76	1982
Degrees Granted								
Bachelor's	2.9	0.6	1.3	1.2	0.3	0.1	1.5	0.3
Master's	2.4	0.2	1.0	0.6	0.2	0.0	2.6	0.9
Ph.D.'s (1983)	0.9	0.7	0.8	1.0	0.2	0.2	2.5	4.9
	1970	1982	1970	1982	1970	1982	1970	1982
General Labor Force	3.2	2.7	1.6	1.7	0.1	0.3	1.9	4.6
	1973	1983	1973	1983	1973	1983	1973	1983
Doctoral Labor Force	0.8	1.0	0.6	1.4	0.0	0.1	4.7	8.4
	1978	1982	1978	1982	1978	1982	1978	1982
Federal Labor Force	4.1	5.0	1.0	1.5	0.1	0.2	2.2	3.9
		1981		1979		1981		1981
Academic Labor Force (Ph.D. Only)		1.2		0.7		0.6		7.4

FIELD: Physical Sciences

SOURCE: Federal Civilian Workforce Statistics, Affirmative Employment Statistics, U.S. Office of Personnel Management, CIG-82-71, September 30, 1982

TABLE 6-3

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN PHYSICAL SCIENCES BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 30, 1982

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		AM. INDIAN		ASIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% I	No.	% A	No.	% W
General Physical Science	4,842	382	7.9	282	5.8	49	1.0	153	3.2	48	1.0	5	0.1	76	1.6	4,560	94.2
Health Physics	542	49	9.0	48	8.9	3	0.6	22	4.1	5	0.9	1	0.2	20	3.7	494	91.1
Physics	4,604	183	4.0	254	5.5	26	0.6	71	1.5	39	0.8	10	0.2	134	2.9	4,350	94.5
Physical Science Technician	4,811	1,388	28.9	832	17.3	284	5.9	486	10.1	135	2.8	34	0.7	177	3.7	3,979	82.7
Geophysics	566	43	7.6	38	6.7	1	0.2	8	1.4	11	1.9	2	0.4	17	3.0	528	93.3
Hydrology	2,031	131	6.5	91	4.5	12	0.6	15	0.7	38	1.9	6	0.3	32	1.6	1,940	95.5
Hydrologic Technician	1,932	367	19.0	181	9.4	34	1.8	63	3.3	74	3.8	16	0.8	28	1.4	1,751	90.6
Chemistry	7,946	1,599	20.1	1,239	15.6	351	4.4	529	6.7	130	1.6	15	0.2	565	7.1	6,707	84.4
Metallurgy	515	14	2.7	52	10.1	1	0.2	7	1.4	10	1.9	1	0.2	34	6.6	463	89.9
Astronomy & Space Science	573	31	5.4	27	4.7	1	0.2	9	1.6	5	0.9	2	0.3	11	1.9	546	95.3
Meteorology	2,155	90	4.2	160	7.4	24	1.1	60	2.8	32	1.5	4	0.2	64	3.0	1,995	92.6
Meterological Technician	2,315	150	6.5	228	9.8	24	1.0	86	3.7	69	3.0	19	0.8	54	2.3	2,087	90.2
Geology	2,829	380	13.4	89	3.1	17	0.6	19	0.7	22	0.8	13	0.5	35	1.2	2,740	96.9
Oceanography	809	88	10.9	63	7.8	15	1.9	37	4.6	11	1.4	3	0.4	12	1.5	746	92.2
Navigational Information	497	63	12.7	41	8.2	11	2.2	27	5.4	8	1.6	3	0.6	3	0.6	456	91.8
Cartography	4,445	759	17.1	649	14.6	149	3.4	443	10.0	155	3.5	9	0.2	42	0.9	3,796	85.4
Cartographic Technician	2,197	718	32.7	373	17.0	104	4.7	182	8.3	121	5.5	36	1.6	34	1.5	1,824	83.0
Geodesy	343	30	8.7	28	8.2	9	2.6	20	5.8	4	1.2	0	0.0	4	1.2	315	91.8
Land Surveying	481	11	2.3	18	3.7	0	0.0	1	0.2	7	1.5	9	1.9	1	0.2	463	96.3
Geodetic Technician	99	27	27.3	17	17.2	11	11.1	16	16.2	1	1.0	0	0.0	0	0.0	82	82.8
Forest Products Technology	113	5	4.4	4	3.5	0	0.0	0	0.0	1	0.9	0	0.0	3	2.7	109	96.5
Food Technology	182	40	22.0	22	12.1	6	3.3	7	3.8	2	1.1	0	0.0	13	7.1	160	87.9
Textile Technology	94	29	30.9	3	3.2	1	1.1	3	3.2	0	0.0	0	0.0	0	0.0	91	96.8
Photographic Technology	73	1	1.4	6	8.2	0	0.0	2	2.7	4	5.5	0	0.0	0	0.0	67	91.8
Document Analysis	46	18	39.1	3	6.5	2	4.3	3	6.5	0	0.0	0	0.0	0	0.0	43	93.5
Phys. Science Student Trainee	324	105	32.4	57	17.6	26	8.0	29	6.0	13	4.0	2	0.6	13	4.2	267	82.4

FIELD: Physical Sciences

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and 1980-1983 Summary Report, Doctorate Recipients from United States Universities, National Research Council, 1981-1984

TABLE 6-4

NUMBER OF Ph.D. RECIPIENTS IN THE PHYSICAL SCIENCES BY TYPE OF CITIZENSHIP, 1960-1983

YEAR	TOTAL	U.S.	FOREIGN			Citizenship not Known
			TOTAL	Immigrants	Non-Immigrants	
1960	1,861	1,619	229	51	178	13
1961	1,993	1,696	269	48	221	28
1962	2,097	1,812	262	32	230	23
1963	2,428	2,045	333	55	278	50
1964	2,527	2,130	343	74	269	54
1965	2,865	2,418	411	85	326	36
1966	3,059	2,526	446	88	358	87
1967	3,504	2,891	540	124	416	73
1968	3,671	3,073	527	130	397	71
1969	3,919	3,251	581	170	411	87
1970	4,404	3,631	709	275	434	64
1971	4,501	3,689	737	330	407	75
1972	4,233	3,348	819	373	446	66
1973	4,021	3,098	856	348	508	67
1974	3,709	2,743	809	302	507	157
1975	3,631	2,734	813	269	544	84
1976	3,442	2,619	765	247	518	58
1977	3,410	2,623	720	213	507	67
1978	3,234	2,494	670	206	464	70
1979	3,321	2,570	685	199	486	66
1980	3,151	2,393	682	176	506	76
1981	3,208	2,419	683	160	523	106
1982	3,348	2,511	733	146	587	104
1983	3,438	2,544	794	149	645	100

FIELD: Chemistry

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1983, National Research Council

TABLE 6-5

DOCTORATES AWARDED FROM 1920 TO 1983 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920–FY1972			FY1973–FY1977			FY1978–FY1981			FY1982			FY1983		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Chemistry Subtotal	42,190	2,550	6.0	4,686	731	15.6	9,292	1,086	11.7	1,678	271	16.2	1,759	297	16.9
Analytical Chemistry	1,883	122	6.5	564	37	6.6	971	110	11.3	190	27	14.2	264	46	17.4
Inorganic Chemistry[1]	2,880	238	8.3	919	120	13.1	971	158	16.3	220	38	17.3	215	38	17.7
Organic Chemistry[1]	11,065	633	5.7	2,361	182	7.7	2,373	291	12.3	516	78	15.1	503	70	13.9
Nuclear Chemistry[2]	364	21	5.8	102	5	4.9	77	10	13.0	20	3	15.0	13	3	23.1
Physical Chemistry	7,291	490	6.7	1,609	207	12.9	1,532	243	15.9	323	49	15.2	311	61	19.6
Theoretical Chemistry[2]	491	48	10.0	201	28	13.9	213	27	12.7	32	6	18.8			
Agriculture & Food Chemistry[3]	925	75	8.1	44	6	13.6	25	4	16.0						
Pharmaceutical Chemistry	914	43	4.7	233	30	12.9	248	36	14.5	55	11	20.0	78	16	20.5
Polymer Chemistry[4]				130	7	5.4	300	20	6.7	50	5	10.0	62	12	19.4
Chemistry, General[5]	3,798	300	7.9	614	70	11.4	796	129	16.2	183	31	16.9	177	23	13.0
Chemistry, Other	12,579	579	4.6	263	42	16.0	325	58	17.9	89	23	25.8	88	21	23.9

1 Broken out into "basic" and "applied" in 1960. The distinction dropped in 1962.
2 Added in 1960. Dropped in 1983.
3 Dropped after 1979.
4 Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "General" classifications of their respective fields.
5 Added in 1973.

FIELD: Chemistry

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 6-6

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	94,601	17,646	18.6	16,425	2,136	13.0
1960-61 thru 1969-70	98,165	18,651	19.0	17,174	3,251	18.9
1970-71	11,183	2,095	18.7	2,253	487	21.6
1971-72	10,721	2,120	19.8	2,259	505	22.4
1972-73	10,226	1,967	19.2	2,230	467	20.9
1973-74	10,525	2,112	20.1	2,138	474	22.2
1974-75	10,649	2,385	22.4	2,006	416	20.7
1975-76	11,107	2,497	22.5	1,796	383	21.3
1976-77	11,215	2,556	22.8	1,767	443	25.1
1977-78	11,474	2,881	25.1	1,892	445	23.5
1978-79	11,643	3,113	26.7	1,765	447	25.3
1979-80	11,446	3,277	28.6	1,733	447	25.8
1980-81	11,347	3,394	29.9	1,654	470	28.4
1981-82	11,062	3,491	31.6	1,751	492	28.1
TOTAL	325,364	68,185	21.0	56,843	10,863	19.1

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1983, National Research Council

TABLE 6-7

DOCTORAL DEGREES BY SEX, 1920-1983

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	21,179	1,061	5.0
FY 1960 thru FY 1969	14,562	931	6.4
FY 1969 thru FY 1972	6,449	558	8.7
FY 1973	1,849	179	9.7
FY 1974	1,792	174	9.7
FY 1975	1,762	192	10.9
FY 1976	1,623	189	11.6
FY 1977	1,570	180	11.5
FY 1978	1,545	196	12.7
FY 1979	1,557	220	14.0
FY 1980	1,538	255	16.6
FY 1981	1,611	235	14.6
FY 1982	1,678	271	16.2
FY 1983	1,759	297	16.9
TOTAL	**60,484**	**4,938**	**8.2**

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Biochemistry

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 6-8

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	1,965	284	14.4	1,748	394	22.1
1960-61 thru 1969-70 #	2,509	673	26.8	2,235	685	30.6
1970-71	568	138	24.3	251	99	39.4
1971-72	699	175	25.0	252	90	35.7
1972-73	872	195	22.4	270	74	27.4
1973-74	1,101	254	23.1	249	65	26.1
1974-75	1,355	359	26.5	270	77	28.5
1975-76	1,622	480	29.6	254	72	28.3
1976-77	1,693	495	29.2	314	104	34.2
1977-78	1,752	517	29.5	319	105	32.9
1978-79	1,799	591	32.9	301	131	43.5
1979-80	1,686	596	35.4	268	98	36.6
1980-81	1,837	656	35.7	258	90	34.9
1981-82	1,865	668	35.8	273	104	38.1
TOTAL	21,323	6,081	28.5	7,262	2,188	30.1

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1983, National Research Council

TABLE 6-9

DOCTORAL DEGREES BY SEX, 1920-1983

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	3,544	484	13.7
FY 1960 thru FY 1969	4,241	713	16.8
FY 1970 thru FY 1972	1,815	322	17.7
FY 1973	636	129	20.3
FY 1974	606	147	24.3
FY 1975	620	147	23.7
FY 1976	616	141	22.9
FY 1977	608	135	22.2
FY 1978	607	146	24.0
FY 1979	600	156	26.0
FY 1980	672	188	28.0
FY 1981	644	189	29.3
FY 1982	650	166	25.5
FY 1983	646	194	30.0
TOTAL	**16,505**	**3,239**	**19.6**

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Chemistry

SOURCE: American Chemical Society, Committee on Professional Training

TABLE 6-10

WOMEN CHEMISTRY GRADUATES BY DEGREE LEVEL, 1971-1983

YEAR	B. S. (ACS Certified)			B. S. (Not Certified)			M. S.			Ph.D.		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
1971	3,708	592	16.0	4,248	744	17.5	1,941	443	22.8	2,097	177	8.4
1972	3,424	587	17.1	4,484	819	18.3	2,019	470	23.3	1,929	207	10.7
1973	3,835	687	17.9	4,225	755	17.9	2,005	439	21.9	1,880	182	9.7
1974	3,844	758	19.7	4,868	948	19.5	1,867	430	23.0	1,732	181	10.4
1975	3,897	794	20.4	5,187	1,110	21.4	1,814	401	22.1	1,781	208	11.7
1976	4,103	855	20.8	5,813	1,332	22.9	1,676	373	22.3	1,622	202	12.5
1977	4,219	949	22.3	5,988	1,355	22.6	1,688	403	23.9	1,563	189	12.1
1978	4,260	995	23.4	6,090	1,540	25.3	1,798	434	24.1	1,532	214	14.0
1979	4,424	1,107	25.0	6,027	1,691	28.1	1,716	448	26.1	1,532	243	15.9
1980	4,170	1,152	27.6	6,000	1,658	27.6	1,698	419	24.7	1,561	274	17.6
1981	4,337	1,223	28.2	6,116	1,805	29.5	1,609	451	28.0	1,613	255	15.8
1982	4,179	1,284	30.7	5,687	1,721	30.3	1,645	491	29.8	1,683	272	16.2
1983	4,233	1,391	32.9	5,810	1,921	33.1	1,569	444	28.3	1,759	300	17.1

SOURCE: Professionals in Chemistry 1979-80 and 1981-82, and personal communication, Department of Professional Services, American Chemical Society, March 1981, March 1983, and June 1984

TABLE 6-11

DEGREES GRANTED IN CHEMISTRY BY MINORITY STATUS AND DEGREE LEVEL, 1973-74 THRU 1981-82

Degree Level and Academic Year	Number of Degrees Granted	PERCENT GRANTED TO MINORITIES AND NON-U.S. CITIZENS				
		Black	American Indian	Asian/ Pacific Islander	Hispanic	Non-U.S. Citizen
Bachelor's						
1973-74	10,525	1.9	0.2	2.0	1.1	2.0
1974-75	10,649	1.4	0.1	2.0	0.9	1.8
1975-76	11,107	1.8	0.2	1.5	1.2	1.2
1976-77	11,322	1.8	0.3	2.2	1.4	1.9
1977-78	11,474	1.6	0.1	2.5	0.8	2.0
1978-79	11,643	1.6	0.2	2.4	1.3	2.3
1979-80	11,860	2.0	0.3	2.0	1.5	2.9
1980-81	11,347	2.7	0.4	2.8	1.7	2.3
1981-82	11,062	2.2	0.2	3.4	2.0	2.1
Master's						
1973-74	2,138	2.6	0.0	1.3	0.0	13.4
1974-75	2,006	1.4	0.5	1.9	0.3	12.1
1975-76	1,796	2.7	0.0	2.1	1.1	9.9
1976-77	1,775	1.9	0.3	1.4	0.5	11.7
1977-78	1,892	3.5	0.3	1.0	0.6	12.6
1978-79	1,765	1.5	1.1	3.4	2.6	10.8
1979-80	1,820	1.3	0.6	4.5	1.3	10.3
1980-81	1,654	3.5	0.0	3.5	0.0	15.2
1981-82	1,742	4.7	0.4	2.1	0.9	7.8
Ph.D.						
1973-74	1,828	1.2	0.2	0.8	0.8	12.7
1974-75	1,824	1.1	0.2	0.7	0.4	11.1
1975-76	1,623	0.6	0.0	2.8	0.8	12.4
1976-77	1,571	1.6	0.2	1.2	1.2	12.4
1977-78	1,525	2.8	0.3	1.8	1.0	12.2
1978-79	1,518	0.0	1.4	2.2	0.8	11.4
1979-80	1,550	0.6	0.0	2.8	0.6	10.1
1980-81	1,622	1.2	0.4	3.1	0.4	11.7
1981-82	1,708	0.6	0.0	2.5	0.6	12.0

FIELD: Chemistry

SOURCE: 1980 Census of Occupations, Bureau of the Census

TABLE 6-12

CHEMISTS** IN ACADEMIC AND OTHER EMPLOYMENT BY SEX, RACE/ETHNICITY

	Total		Post-Secondary Teachers		All Other	
	No.	%	No.	%	No.	%
TOTAL	110,621	100.00	8,382	100.00	102,239	100.00
MALES	88,370	79.89	6,671	79.59	81,699	79.91
White*	76,765	69.39	6,040	72.06	70,725	69.18
Black*	3,719	3.36	148	1.77	3,571	3.49
Indian/Alaskan Native*	160	0.14	15	0.18	145	0.14
Asian/Pacific Isl.*	5,673	5.13	351	4.19	5,322	5.21
Other Race*	142	0.13	0	0.00	142	0.14
Hispanic	1,911	1.73	117	1.40	1,794	1.75
FEMALES	22,251	20.11	1,711	20.41	20,540	20.09
White*	17,830	16.12	1,531	18.27	15,849	15.50
Black*	1,514	1.37	58	0.69	1,456	1.42
Indian/Alaskan Native*	56	0.05	0	0.00	56	0.05
Asian/Pacific Isl.*	2,431	2.22	83	0.99	2,348	2.30
Other Race*	39	0.04	0	0.00	39	0.04
Hispanic	831	0.75	39	0.47	792	0.77

* Non-Hispanic
** Except Biochemists

SOURCE: Salaries 1983, American Chemical Society, June 1983

TABLE 6-13

DISTRIBUTION OF ACS MEMBER CHEMISTS BY AGE, HIGHEST DEGREE AND SEX, 1983

	BACHELOR'S		MASTER'S		DOCTOR'S	
Age Level	Men	Women	Men	Women	Men	Women
20 - 24	5.3	19.4	0.4	1.7	0.1	0.2
25 - 29	16.0	31.5	8.9	22.9	5.3	14.1
30 - 34	13.3	13.2	16.6	19.6	13.6	22.5
35 - 39	10.0	10.3	14.2	17.5	16.9	17.6
40 - 44	9.0	8.7	10.4	10.4	18.7	17.1
45 - 49	8.7	4.3	10.1	9.5	12.6	10.0
50 - 54	11.9	5.2	12.6	6.4	12.5	6.8
55 - 59	13.4	4.4	14.6	6.1	10.0	5.7
60 - 64	9.4	1.7	9.4	4.0	7.6	4.3
65 - 69	2.4	0.8	2.1	1.7	2.4	0.7
70 and over	0.2	0.2	0.4	0.0	0.1	0.4
No Response	0.4	0.3	0.2	0.2	0.3	0.7
Total*	100.0	100.0	99.9	100.0	100.1	100.1

*Totals may not equal 100% due to rounding.

FIELD: Chemistry

SOURCE: 1976, 1978 and 1979 Report of Chemists' Salaries and Employment Status and Salaries 1981 - 1983, Office of Manpower Studies, American Chemical Society, July 1976, June 1978, July 1981, June 1982, and June 1983

TABLE 6-14

DISTRIBUTION OF ACS CHEMISTS BY DEGREE AND MINORITY CLASSIFICATION, 1976, 1978, 1981, 1982 AND 1983

MINORITY CLASSIFICATION	1976				1978				1981				1982				1983			
	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D	Total
Black	1.2	1.8	1.0	1.2	1.2	1.5	0.8	1.0	1.1	1.7	0.9	1.2	1.1	1.2	0.8	1.0	1.8	1.6	1.0	1.3
American Indian	0.2	0.0	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.4	0.0	0.1	0.2
Asian	2.1	2.8	4.2	3.3	2.0	4.1	6.3	4.7	2.4	4.4	7.3	5.3	2.4	4.4	7.4	5.5	3.0	4.5	8.1	6.0
Hispanic	0.7	0.8	0.5	0.6	0.8	0.9	0.7	0.7	0.7	0.7	0.5	0.6	0.7	1.2	0.6	0.7	1.0	1.1	0.8	0.9
All Minorities	4.2	5.4	5.9	5.3	4.1	6.7	7.9	6.5	4.7	7.0	8.8	7.2	4.4	6.9	9.0	7.4	6.2	7.2	10.0	8.4
Non-Minority	95.8	94.6	94.1	94.7	95.9	93.3	92.2	93.5	94.1	91.9	90.3	91.2	94.7	92.1	89.6	91.2	92.6	91.6	88.8	90.2

TABLE 6-15

DISTRIBUTION OF ACS CHEMISTS BY SEX AND MINORITY CLASSIFICATION, 1976, 1978, 1979, 1981 1982, and 1983*

MINORITY CLASSIFICATION	1976		1978		1979	1981			1982			1983		
	Men	Women	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Black	1.0	2.8	1.0	1.3	1.1	0.9	3.6	1.2	0.9	1.3	1.0	1.1	2.4	1.3
American Indian	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.2
Asian	3.0	6.9	4.5	6.2	5.1	5.2	6.7	5.3	5.3	7.4	5.5	5.9	6.7	6.0
Hispanic	0.6	0.9	0.7	0.9	0.7	0.6	0.9	0.6	0.7	0.8	0.7	0.8	1.2	0.9
All Minorities	4.8	10.7	6.3	8.5	7.2	7.6	12.2	8.8	7.1	9.6	7.4	8.0	10.4	8.4
Non-Minority	95.2	89.3	93.6	91.6	91.3	92.4	87.8	91.2	91.9	89.8	91.2	91.0	88.8	90.2

* Includes only ACS members who responded to survey.

Note: Totals may not add to 100% due to no responses

FIELD: Chemistry

SOURCE: Salaries 1983, American Chemical Society, July 1983

TABLE 6-16

ACS MEMBER CHEMISTS EMPLOYED FULL TIME IN PRIVATE INDUSTRY BY WORK FUNCTION, HIGHEST DEGREE AND SEX, 1983

Work Function	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
Management R&D	181	18	9.9	160	12	7.5	582	10	1.7
Basic Research	116	42	36.2	99	26	26.3	458	32	7.0
Applied R&D	549	120	21.9	388	68	17.5	1,033	76	7.4
Management Non-R&D	143	14	9.8	77	9	11.7	91	3	3.3
Marketing	187	11	5.9	97	5	5.2	82	8	9.8
Prod. & Quality Control	386	82	21.2	145	22	15.2	85	5	5.9
Forensic Analysis	91	27	1.1	39	6	15.4	22	3	13.6
Writing/ Editing	12	8	66.7	15	11	73.3	15	3	20.0
Data Processing	5	2	40.0	5	0	0.0	0	0	0.0
Consulting	13	1	7.7	20	4	20.0	20	0	0.0
Other	46	15	32.6	18	1	5.6	19	0	0.0
No Response	113	19	16.8	48	11	22.9	102	5	4.9
TOTAL	1,842	359	19.5	1,111	175	15.8	2,509	145	5.8

TABLE 6-17

ACS MEMBER CHEMISTS EMPLOYED FULL TIME IN PRIVATE INDUSTRY BY WORK SPECIALTY, HIGHEST DEGREE AND SEX, 1983

Work Specialty	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
Biochemistry	33	10	30.3	25	10	40.0	107	10	9.3
Agric./Food	96	6	6.3	48	6	12.5	115	4	3.8
Analytical	598	46	7.7	297	46	15.5	367	37	10.1
Environmental	96	10	10.4	69	10	14.5	81	4	4.9
Organic	216	16	7.4	144	16	11.1	518	22	4.2
Inorganic	89	5	5.6	40	5	12.5	135	8	5.9
Pharm/Med/ Clinical	146	33	22.6	127	33	26.0	264	14	5.3
Physical	32	5	15.6	30	5	16.7	231	13	5.6
Theoretical	1	0	0.0	0	0	0.0	6	0	0.0
Polymer/ Macromolecular	300	24	8.0	190	24	12.6	503	17	3.4
Other	235	20	8.5	141	20	14.2	182	16	8.8
Total	1,842	175	9.5	1,111	175	15.8	2,509	145	5.8

SOURCE: Women Chemists 1980, American Chemical Society, September 1981

TABLE 6-18

PERCENTAGE OF TENURED ACADEMIC CHEMISTS* HOLDING THE RANK OF ASSISTANT PROFESSOR OR ABOVE AT PH.D. GRANTING UNIVERSITIES BY YEARS SINCE B.S. AND SEX, 1980

SEX	YEARS SINCE B.S							
	5-7	8-12	13-17	18-22	23-27	28-32	33-37	38-42
Women	0.0	1.8	5.7	11.6	5.8	7.1	22.5	9.9
Men	0.0	7.2	52.2	73.3	87.8	87.0	76.1	83.5

* ACS members only

FIELD: Chemistry

SOURCE: Women Chemists 1980, American Chemical Society, September 1981

TABLE 6-19

WOMEN ON CHEMISTRY FACULTIES, 1979-1980

DEGREE GRANTED BY INSTITUTIONS	TOTAL FACULTY	TOTAL WOMEN	FACULTY RANK OF WOMEN			TOTAL NO. OF INSTITUTIONS IN GROUP	INSTITUTIONS WITH NO WOMEN ON CHEM. FACULTY
			PROF.	ASSOC. PROF.	ASST. PROF.		
PH.D. Chemistry*	4,253	132 (3.1%)	29 (22.0%)	41 (31.1%)	62 (47.0%)	188	95 (50.5%)
PH.D. Biochemistry*	2,351	227 (9.7%)	47 (20.7%)	77 (33.9%)	103 (45.4%)	139	29 (20.9%)
M.S.-B.S. Chemistry Women's Colleges	218	107 (49.1%)	42 (40.4%)	28 (26.9%)	34 (32.7%)	64	16 (25.0%)
M.S.-B.S. Chemistry Other Colleges	5,270	398 (7.6%)	115 (28.9%)	136 (34.2%)	147 (36.9%)	831	552 (66.4%)
Total All M.S.-B.S.** Chemistry Colleges	5,488	502 (9.1%)	157 (31.2%)	164 (32.7%)	181 (36.1%)	895	568 (63.5%)

*Three institutions did not report. ** Three women were unranked.

TABLE 6-20

DISTRIBUTION OF FULL-TIME EMPLOYED ACADEMIC PH.D. ACS MEMBER CHEMISTS BY SEX AND RANK, 1980

RANK	% MEN	% WOMEN
Professor	53.8	24.2
Associate Professor	22.4	22.2
Assistant Professor	15.6	32.8
Instructor	2.0	5.7
Non-Faculty	3.0	10.3
Unranked	1.3	2.6
No Response	1.8	2.2
Total	100.0	100.0

SOURCE: Compiled for the Women Chemists Committee of the American Chemical Society by Dr. Agnes Ann Green

TABLE 6-21

WOMEN ON CHEMISTRY AND BIOCHEMISTRY FACULTIES, IN DOCTORAL INSTITUTIONS, 1970-71 THRU 1982-83

	Full-time Staff	WOMEN FACULTY					No. of Depts.	% All Male Depts.
		Total W	% W	Professor	Assoc. Prof.	Ass't Prof.		
Chemistry								
1970-71	4,091	61	1.5	15	23	23	208	74.0
1972-73	4,242	89	2.1	16	29	43	210	69.0
1974-75	4,056	92	2.3	19	29	44	210	66.0
1976-77	4,125	110	2.7	27	28	55	213	62.0
1978-79	4,250	140	3.3	33	41	66	216	48.0
1980-81	4,345	159	3.7	37	44	78	221	51.0
1982-83	4,470	180	4.1	45	49	86	221	44.0
BIOCHEMISTRY								
1976-77	2,196	188	8.6	40	52	96	139	27.0
1978-79	2,351	227	9.7	47	77	103	139	21.0
1980-81	2,274	213	9.4	54	74	85	130	21.0
1982-83	2,580	220	8.5	50	78	92	136	23.0

FIELD: Physics and Astronomy

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973. Doctorate Recipients from United States Universities Summary Reports, 1972-1983, National Research Council

TABLE 6-22

DOCTORATES AWARDED FROM 1920 to 1983 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY 1920-FY 1972			FY 1973-FY 1977			FY 1978-FY 1981			FY 1982			FY 1983		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
Physics and Astronomy, Subtotal	23,187	610	2.6	6,601	301	4.6	4,174	265	6.3	1,013	84	8.3	1,042	74	7.1
Astronomy & Astrophysics[1]	821	89	10.8												
Astronomy[1]	206	14	6.8	321	31	9.7	224	24	10.7	52	11	21.2	50	8	16.0
Astrophysics[1]	250	17	6.8	342	18	5.3	259	15	5.8	50	5	10.0	65	7	10.8
Atomic & Molecular Physics	1,650	30	1.8	602	20	3.3	294	16	5.4	96	7	7.3	71	6	8.5
Electromagnetism[2]	354	4	1.2	44	2	4.5	16	0							
Electron Mechanics[3]	97	0		15	2	13.3							1	0	0.0
Acoustics[4]	187	0		59	2	3.4	63	5	7.9	11	0		14	1	7.1
Fluids[5]	347	10	2.9	106	3	2.8	56	5	8.9	13	2	15.4	15	2	13.3
Plasma Physics[6]	326	2	0.6	331	7	2.1	254	13	5.1	69	3	4.3	72	2	2.8
Optics	204	2	1.0	173	5	2.9	176	4	2.3	42	2	4.8	50	2	4.0
Thermal Physics[7]	175	6	3.4	54	3	5.3	30	0							
Elementary Particles[7]	2,425	64	2.6	760	35	4.6	488	23	4.7	118	4	3.4	136	3	2.2
Nuclear Physics[7]	48	0													
Nuclear[7]	2,549	49	1.9	645	23	3.6	315	17	5.4	53	6	11.3	90	6	6.7
Atomic and Molecular													71	6	8.5
Solid State Physics[8]	4,068	81	2.0	1,609	74	4.6	938	68	7.2	235	19	8.1	221	21	9.5
Theoretical Physics[9]	559	9	1.6												
Physics, General	2,770	85	3.1	889	49	5.5	685	44	6.4	167	13	7.8	150	9	6.0
Physics, Other	6,157	148	2.4	637	37	5.8	376	31	8.2	107	12	11.2	97	7	7.21

1 Broken out into two separate fields in 1968.
2 Originally shown as "Electricity & Magnetism." Changed to "Electromagnetism" in 1966.
3 Originally shown as "Mechanics & Heat." In 1960, it was separated into two fields, "Mechanics" and "Heat" (thermal). Dropped in 1977.
4 Added in 1960.
5 Added in 1968.
6 In 1962, "Heat" (thermal) was changed to "Thermal Phenomena" and to "Thermal Physics" in 1966.
7 In 1962, "Nuclear Physics" was separated into "Elementary Particles" and "Nuclear Structure." In 1983, it is named "Nuclear" and "Atomic & Molecular".
8 Dropped in 1962.
9 Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "general" classification of their respective fields.

FIELD: Astronomy

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 6-23

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	286	60	21.0	197	25	12.7
1960-61 thru 1969-70	841	117	13.9	667	81	12.1
1970-71	102	8	7.8	100	12	12.0
1971-72	139	23	16.5	89	11	12.3
1972-73	110	23	20.9	89	11	12.4
1973-74	152	33	21.7	82	11	13.4
1974-75	115	20	17.4	110	14	12.7
1975-76	116	15	12.9	81	7	8.6
1976-77	122	19	15.6	68	14	20.6
1977-78	110	24	21.8	84	12	14.3
1978-79	93	20	21.5	97	15	15.5
1979-80	96	16	16.7	70	9	12.9
1980-81	98	19	19.4	51	7	13.7
1981-82	81	16	19.8	61	10	16.4
TOTAL	2,461	413	16.8	1,848	239	12.9

SOURCE: Doctorates Awarded from 1920 to 1971 by subfield of Doctorate Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1983, National Research Council

TABLE 6-24

DOCTORAL DEGREES BY SEX, 1920-1983

Y E A R	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	386	61	15.8
FY 1960 thru 1969	538	35	6.5
FY 1970-72	170	12	7.0
FY 1973	64	4	6.2
FY 1974	56	5	8.9
FY 1975	60	8	13.3
FY 1976	78	7	9.0
FY 1977	63	7	11.1
FY 1978	64	4	6.3
FY 1979	58	6	10.3
FY 1980	52	7	13.5
FY 1981	50	7	14.0
FY 1982	52	11	21.2
FY 1983	50	8	16.0
TOTAL	1,741	182	10.5

* Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present

FIELD: Physics

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 6-25

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	35,769	1,613	4.5	10,795	425	3.9
1960-61 thru 1969-70	49,084	2,580	5.3	18,629	883	4.7
1970-71	5,076	343	6.8	2,194	152	6.9
1971-72	4,645	323	7.0	2,035	159	7.8
1972-73	4,268	313	7.3	1,755	113	6.4
1973-74	3,962	337	8.5	1,662	136	8.2
1974-75	3,716	362	9.7	1,577	124	7.9
1975-76	3,544	388	10.9	1,451	132	9.1
1976-77	3,420	358	10.5	1,319	126	9.6
1977-78	3,330	369	11.1	1,294	123	9.5
1978-79	3,338	399	12.0	1,319	135	10.2
1979-80	3,397	434	12.8	1,192	118	9.9
1980-81	3,441	432	12.6	1,294	115	8.9
1981-82	3,472	460	13.2	1,284	156	12.1
TOTAL	130,452	8,711	6.7	47,800	2,897	6.1

SOURCE: Doctorates awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-83, National Research Council

TABLE 6-26

DOCTORAL DEGREES BY SEX, 1920-1983

Y E A R	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	7,948	189	2.4
FY 1960 thru FY 1969	9,285	178	1.9
FY 1970-72	4,677	123	2.6
FY 1973	1,459	50	3.4
FY 1974	1,278	52	4.1
FY 1975	1,233	62	5.3
FY 1976	1,157	47	4.1
FY 1977	1,086	57	5.2
FY 1978	1,002	48	4.8
FY 1979	1,050	67	6.4
FY 1980	933	60	6.4
FY 1981	965	67	7.0
FY 1982	961	73	7.6
FY 1983	992	66	6.7
TOTAL	34,026	1,139	3.3

* Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Physics

SOURCE: Enrollments and Degrees, American Institute of Physics, R-151.20, February 1983

TABLE 6-27

NUMBER OF PHYSICS DEGREES GRANTED BY SEX AND MINORITY GROUP* STATUS, 1982-1983

Type of degree	Sex	Total no. of degrees	Black	Am. Ind.	Puerto Rican	Mex. Am.	Hispanic	Oriental	Asian Ind.	Arab	Total minorities
Bachelor's	Men	4253	96	1	7	12	33	86	24	46	305
	Women	542	20	–	1	4	9	30	5	4	73
	Total	4795	116	1	8	16	42	116	29	50	378
Master's enroute	Men	734	13	–	–	–	12	92	20	14	151
	Women	67	1	–	–	–	1	12	6	3	23
	Total	801	14	–	–	–	13	104	26	17	174
Terminal master's	Men	561	9	–	–	1	5	28	4	6	53
	Women	64	4	–	–	–	1	4	3	2	14
	Total	625	13	–	–	1	6	32	7	8	67
Doctorate	Men	853	17	3	–	1	16	65	30	20	152
	Women	68	–	–	–	–	1	6	8	–	15
	Total	921	17	3	–	1	17	71	38	20	167

*Minorities in AIP surveys are defined as groups with a low representation in the physics community, but ones whose participation has aroused considerable interest.

SOURCE: Graduate Student Survey, American Institute of Physics, AIP Pub. No. R-207.15, 1984

TABLE 6-28

CHARACTERISTICS OF THE GRADUATE ASTRONOMY STUDENT POPULATION, 1982-83

CHARACTERISTICS	ALL GRAD. STUDENTS	% M	% W	FIRST-YEAR GRAD. STUDENTS	% M	% W	DOCTORATE RECIPIENTS	% M	% W
Total Population	670	86	14	178	84	16	81	87	13
No. of Respondents	494			90			46		
Citizenship									
U.S.	82%			72%			89%		
Foreign	18%			28%			11%		

FIELD: Physics

SOURCE: Graduate Student Survey, American Institute of Physics, AIP Pub. No. R-207-11, February 1979; R-207.12, June 1980; R-207.13, May 1981; R-207.14, May 1982, and R-207.16, 1984

TABLE 6-29

GRADUATE PHYSICS STUDENTS BY MINORITY GROUP AND SEX, 1978-79, 1980-81, AND 1982-83

MINORITY GROUP	1978-1979			1980-1981			1982-1983		
	TOTAL	WOMEN	% MINORITY	TOTAL	WOMEN	% MINORITY	TOTAL	WOMEN	% MINORITY
Black	77	7	0.78	94	10	0.95	78	9	0.75
U.S.				70	10	0.71	46	7	0.44
Foreign				24	0	0.24	32	2	0.31
American Indian	5	2	0.05	12	2	0.12	9	1	0.09
Puerto Rican	16	4	0.16	21	3	0.21	17	2	0.16
Mexican American	27	3	0.28	15	0	0.15	11	2	0.11
Other Hispanic	116	18	1.18	139	12	1.40	167	11	1.60
U.S.				18	2	0.18	23	1	0.22
Foreign				121	10	1.22	144	10	1.38
Asian Indian	326	35	3.32	360	66	3.62	351	68	3.36
Oriental	633	68	6.45	700	94	7.05	934	139	8.96
U.S.	102	9	1.04	88	15	0.89	87	16	0.83
Foreign	531	59	5.41	612	79	6.16	847	123	8.12
Arab	146	13	1.49	171	12	1.72	210	27	2.01
Total Minority	1,346	150	13.72	1,512	199	15.22	1,777	259	17.04
Total Population	9,813	785		9,934			10,429		

SOURCE: Graduate Student Survey, American Institute of Physics, AIP Pub. No. R-207-11, February 1979; R-207.12, June 1980; R-207.13, May 1981; R-207.14, May 1982; and R-207.16, 1984

TABLE 6-30

CHARACTERISTICS OF THE GRADUATE PHYSICS STUDENT POPULATION, 1982-83

CHARACTERISTICS	ALL GRADUATE STUDENTS	FIRST-YEAR GRADUATE STUDENTS	DEGREE RECIPIENTS	
			TERMINAL MASTERS	DOCTORATE RECIPIENTS
Total Population	10,429	2,630	625	921
Number of Respondents	6,442	1,267	163	567
Percent Women	11%	12%	13%	7%
Percent Men	89%	88%	87%	93%
Percent U.S. Citizenship	67%	60%	83%	73%
Percent Foreign Citizenship	33%	40%	17%	27%

FIELD: Physics

SOURCE: "Women in Physics: Unnecessary, Injurious, and Out of Place?" by Vera Kistiakowsky, PHYSICS TODAY, Feb. 1980

TABLE 6-31

NUMBER AND PERCENT WOMEN ON PHYSICS FACULTIES, 1971-72 AND 1978-79

TYPE OF DEPARTMENTS	NO. OF DEPTS	YEAR	ALL PROFESSORS		PROFESSORS		ASSOCIATE PROFESSORS		ASSISTANT PROFESSORS	
			NO. W	% W	NO. W	% W	NO. W	% W	NO. W	% W
Top Ten*	10	1971-72	4	0.8	2	0.6	1	1.1	1	0.9
	10	1978-79	11	2.7	3	1.[illegible]	3	5.8	5	7.7
Ph.D. Granting	158	1971-72	74	1.5	23	1.0	24	1.8	27	2.0
	212	1978-79	88	1.7	38	1.2	2[illegible]	1.5	28	4.5
Master's Granting	133	1971-72	28	2.3	7	1.9	9	2.2	12	2.6
	123	1978-79	27	2.5	8	1.5	12	2.9	7	4.4
Bachelor's Granting	743	1971-72	144	5.4	55	5.8	33	4.9	56	5.2
	60[illegible]	1978-79	93	3.9	29	3.2	35	3.9	39	6.9
TOTAL ALL DEPARTMENTS	**1,034**	**1971-72**	**246**	**2.8**	**85**	**2.4**	**66**	**2.7**	**95**	**3.3**
	941	**1978-79**	**218**	**2.5**	**75**	**1.7**	**69**	**2.5**	**74**	**3.5**

*California Institute of Technology, Princeton, U. of California at Berkeley, U. of Chicago, Harvard, Cornell, MIT, Columbia, U. of Illinois, and Stanford.

SOURCE: "Survey Compiled for the APS Committee on the Status of Women," American Physical Society, as reported in PHYSICS TODAY, February 1982

TABLE 6-32

WOMEN AS SENIOR PHYSICS FACULTY, 1980-81

University	Total	Women
Auburn University	16	1
Brooklyn College	24	1
Brown University	34	1
Bryn Mawr College	3	1
California-Irvine	21	1
California-Los Angeles	42	1
California-Riverside	18	2
California-San Diego	37	1
Chicago, University of	36	1
Cincinnati, University of	23	1
City College of CUNY	52	1
Clemson University	24	1
Connecticut, University of	26	1
Denver, University of	14	1
Florida State University	27	1
George Washington University	14	1
Georgetown University	11	1
Illinois-Chicago Circle	26	1
Illinois-Urbana	61	2
Indiana University	41	1
Johns Hopkins University	21	1
Kentucky, University of	15	1
Maryland, University of	62	1
Massachusetts Inst. of Technology	83	4
Massachusetts, University of	33	1
Minnesota, University of	38	1
Missouri-Rolla	25	2
Montana State University	14	1
North Carolina State University	25	1
Northeastern University	28	1
Oklahoma, University of	16	1
Pennsylvania, University of	36	1
Pittsburgh, University of	39	2
Polytechnic Institute of New York	16	1
Queens College of CUNY	20	1
Rhode Island, University of	15	1
Rutgers University	33	2
Southern California, University of	17	1
SUNY-Albany	23	1
SUNY-Stony Brook	49	1
Tennessee, University of	39	1
Texas Austin	52	1
Tufts University	9	1
Utah State University	15	1
Washington, University of	42	1
Wisconsin-Madison	46	1
Total Senior Physics Faculty for above 46 Departments	1381	54
Total for 125 Departments with no women on the Senior Physics Faculty	2304	0
Total Senior Physics Faculty for 171 Departments	3865	54
Total Assistant Professors for 171 Departments	511	25
Total Physics Faculty for 171 Departments	4176	79

SOURCE: 1980 Census of Occupations, Bureau of the Census

TABLE 6-33

PHYSICISTS AND ASTRONOMERS IN ACADEMIC AND OTHER EMPLOYMENT, BY SEX, RACE/ETHNICITY

	Total		Post-Secondary Teachers		All Other	
	No.	%	No.	%	No.	%
TOTAL	27,887	100.00	5,414	100.00	22,473	100.00
MALES	26,135	93.72	4,882	90.17	21,253	94.57
White*	23,716	85.04	4,363	80.59	19,352	86.11
Black*	379	1.36	65	1.20	314	1.40
Indian/Alaskan Native*	36	0.13	6	0.11	30	0.13
Asian/Pacific Isl.*	1,455	5.22	303	5.60	1,152	5.13
Other Race*	93	0.33	12	0.22	81	0.36
Hispanic	457	1.64	133	2.46	324	1.44
FEMALES	1,752	6.29	532	9.83	1,220	5.43
White*	1,554	5.57	452	8.35	1,102	4.90
Black*	57	0.20	16	0.30	41	0.18
Indian/Alaskan Native*	0	0.00	0	0.00	0	0.00
Asian/Pacific Isl.*	78	0.28	38	0.70	40	0.18
Other Race*	4	0.01	4	0.07	0	0.00
Hispanic	59	0.21	22	0.41	37	0.16

* Non-Hispanic

SOURCE: CSWP Gazette, Issue #9, March 1, 1983, Committee on the Status of Women in Physics, American Physical Society

TABLE 6-34

WOMEN PHYSICISTS IN INDUSTRIAL LABS, 1982

Laboratory	Total Physicists	Women Physicists	Percent Women	Physicist Research Managers	Women Physicist Research Mgrs.	Percent Women
GTE, Waltham	51	3	5.9	7	0	0
RCA, Princeton[1]	xxx	xxx	xxx	xxx	xxx	xxx
Bell Labs Research Physics Division	152	11	7.2	5 mgrs 16 dept. heads	0 0	0 0
Exxon, Linden Corp Research Lab	37 MTS 15 temps	2 2	5.4 13.3	3	0	0
Stanford Research Institute[2]	25 PhD 7 MS 12 BS	1 0 0	4.0 0 0	xxx xxx xxx	xxx xxx xxx	xxx xxx xxx
Westinghouse [3]	xxx	xxx	xxx	xxx	xxx	xxx
GE, Schenectady R and D	92	1	1.1			
General Motors Physics Dept	36	1	2.8	3	0	0
IBM, Yorktown Hts[4]						
Ford Motor [5]	33	2	6.1	1	0	0
Xerox, Webster [6] Corp Research Cntr	45-50 MTS 6 postdoc	1 1	2 16.7			

[1] Refused to divulge information. To the best of our knowledge, there are no women physicists at RCA Laboratories.
[2] SRI refused to divulge information on managers
[3] Refused to divulge information.
[4] Data not available at press time, but it is known that IBM has several women physicists on its technical staff.
[5] There are 2 physicist "staff scientists" among the 33 MTS and 1 is a woman.
[6] There are 3 physicist "fellows of the technical staff" among the MTS and 1 is a woman.

FIELD: Earth, Atmospheric and Marine Sciences

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1983, National Research Council

TABLE 6-35

DOCTORATES AWARDED FROM 1920 TO 1983 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978-FY1981			FY1982			FY1983		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Earth, Atmospheric & Marine Sciences, Subtotal [1]	8,341	221	2.6	2,925	178	6.1	2,479	239	9.6	657	103	15.7	512	106	20.7
Atmospheric Physics & Chemistry [1]							72	3	4.2	17	0	-	19	2	10.5
Atmospheric Dynamics [1]							94	6	6.4	22	3	13.6	11	5	45.5
Meteorology [1]	671	11	1.6	331	22	6.6							13	4	30.8
Atmosph./Meteorol. Sci., General [1]							83	7	8.4	22	5	22.7	13	3	23.1
Atmosph./Meteorol. Sci., Other [1]							132	12	9.1	26	1	3.8	20	3	15.0
Geology [2]													83	15	18.1
Geochemistry [3]	172	10	5.8	243	17	7.0	207	26	12.6	51	8	15.7	45	3	6.7
Geophysics & Seismology [4]	698	8	1.1	386	18	4.7	284	18	6.3	80	6	7.5	56	16	28.6
Paleontology	499	18	3.6	193	25	13.0	107	21	19.6	24	7	29.2	17	0	-
Mineralogy, Petrology [3]	214	15	7.0	236	12	5.1	144	17	11.8	41	8	19.5	20	4	20.0
Stratigraphy, Sedimentation	908	12	1.3	243	13	5.3	148	19	12.8	47	8	17.0	20	5	25.0
Geomorphology, Glacial Geology [2]	207	5	2.4	128	4	3.1	66	7	10.6	21	6	28.6	9	1	11.1
Applied Geology [2]													6	2	33.3
Structural Geology [2]	284	6	2.1	96	4	4.2	103	8	7.8	25	6	24.0			
Geological Science, General [2]													11	2	18.2
Geological Science, Other [2]													17	1	5.9
Environmental Science [5]							192	26	13.5	53	11	20.8	41	9	18.4
Hydrology & Water Resources	127	1	0.8	103	16	15.5	100	4	4.0	24	3	12.5	12	8	66.7
Oceanography [6]	524	11	2.1	456	34	7.5	344	34	9.9	92	14	15.2	71	16	22.5
Marine Sciences [5]							114	14	12.3	41	9	22.0	18	4	22.2
Physical Science, Other [5]													10	3	30.0
Earth Sciences, General [5]	2,372	74	3.1	201	10	5.0	176	13	7.4	39	5	12.8			
Earth Sciences, Other [5]	362	22	6.1	151	13	8.6	82	8	9.8	29	6	20.7			

[1] "Meteorology" subdivided in 1976 to "Atmospheric Physics & Chemistry"; "Atmospheric Dynamics"; and "Atmospheric Sciences." In 1983 added "Meteorology," "Atmospheric" and "Meteorological Sciences," "General" and "Other."

[2] "Geology" changed to "Structural Geology" in 1962; broken out as "Geology," "Applied Geology," "Geological Sciences, Other" and "Geological Sciences, General," in 1983.

[3] Originally specified as "Geochemistry." In 1962 the field was extended to include "Mineralogy" and "Petrology." In 1968, this specification was broken out into "Geochemistry" and "Mineralogy, Petrology."

[4] Originally specified as "Geophysics." Changed to "Solid Earth Geophysics" in 1962 and to "Solid Earth & Atmospheric Geophysics" in 1968; to "Geophysics, Solid Earth" in 1976; and to "Geophysics & Seismology" in 1983.

[5] Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "general" classification of their respective fields.

[6] In 1978, "Environmental Sciences," "General," and "Other" were added. In 1983, "Environmental Sciences" became a separate field and "Physical Sciences, Other" was added. Added in 1978 as "Marine Sciences, Other". In 1983, "Marine Sciences."

FIELD: Geology and Earth Sciences

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 6-36

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	29,222	1,187	4.1	6,886	239	3.5
1960-61 thru 1969-70	18,293	1,657	9.1	7,583	485	6.4
1970-71	3,330	379	11.4	1,084	113	10.4
1971-72	3,861	489	12.7	1,299	150	11.5
1972-73	4,273	544	12.7	1,416	183	12.9
1973-74	4,834	800	16.5	1,604	201	12.5
1974-75	4,830	839	17.4	1,512	198	13.5
1975-76	4,864	916	18.8	1,515	218	14.4
1976-77	5,521	1,192	21.6	1,619	228	14.1
1977-78	5,885	1,318	22.4	1,760	295	16.8
1978-79	6,078	1,428	23.5	1,772	326	18.4
1979-80	5,536	1,366	24.7	1,481	295	10.9
1980-81	6,106	1,532	25.1	1,525	352	23.1
1981-82	6,425	1,697	26.4	1,682	381	22.7
TOTAL	109,058	15,389	14.1	32,738	3,664	11.2

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1983, National Research Council

TABLE 6-37

DOCTORAL DEGREES* BY SEX, 1920-1983

YEAR	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959†	3,179	101	3.2
FY 1960 thru FY 1969	3,521	69	2.0
FY 1970 thru FY 1972	1,641	51	3.1
FY 1973	577	22	3.8
FY 1974	570	29	5.1
FY 1975	556	22	4.0
FY 1976	584	53	9.1
FY 1977	638	52	8.1
FY 1978	623	61	9.8
FY 1979	646	58	9.0
FY 1980	628	64	10.2
FY 1981	582	56	9.6
FY 1982	657	103	15.7
FY 1983	637	97	15.2
TOTAL	**15,039**	**838**	**5.6**

*Includes Earth, Marine, Atmospheric and Environmental Sciences.
†Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

Field: Geosciences

Source: Student Enrollment in Geoscience Departments 1971-72, 1974-75, 1977-78, 1980-81, 1981-82, American Geological Institute

TABLE 6-38

DEGREES GRANTED IN THE GEOSCIENCES BY LEVEL, SEX AND ETHNIC ORIGIN 1971-72, 1974-75, 1977-78, 1980-81 and 1981-82

	Bachelor's		Master's		Doctorates		Total	
	No.	%	No.	%	No.	%	No.	%
1971-72								
TOTAL	3,804	66.80	1,332	23.40	560	9.80	5,696	100.00
Women	473	12.40	146	11.00	28	5.00	647	11.40
TOTAL MINORITY	29	0.76	40	3.00	3	0.54	72	1.26
Blacks	13	0.34	27	2.00	2	0.36	42	0.74
Hispanics	16	0.42	12	0.90	1	0.18	29	0.51
Asians								
Am. Indians			1	0.08			1	0.02
1974-75								
TOTAL	3,650	68.40	1,267	23.70	416	7.80	5,333	100.00
Women	707	19.40	184	14.50	27	6.50	918	17.20
TOTAL MINORITY	68	1.86	34	2.68	6	1.44	108	2.02
Blacks	14	0.38	15	1.18			29	0.54
Hispanics	24	0.65	4	0.31	4	0.96	32	0.60
Asians	29	0.79	15	1.18	2	0.48	46	0.86
Am. Indians	1	0.27					1	0.01
1977-78								
TOTAL	5,982	72.60	1,799	21.80	455	5.50	8,236	100.00
Women	1,287	21.50	316	17.60	49	10.80	1,652	20.10
TOTAL MINORITY	107	1.79	21	1.17	10	2.20	138	1.68
Blacks	38	0.64	5	0.28	1	0.22	44	0.53
Hispanics	36	0.60	6	0.33	2	0.44	44	0.53
Asians	29	0.49	9	0.50	6	1.32	44	0.53
Am. Indians	4	0.07	1	0.06	1	0.22	6	0.07
1980-81								
TOTAL	6,879	73.36	2,014	21.48	484	5.16	9,377	100.00
Women	1,684	24.48	441	21.90	85	17.56	2,210	23.57
TOTAL MINORITY	177	2.57	36	1.79	12	2.48	225	2.40
Blacks	46	0.67	3	0.15	2	0.41	51	0.54
Hispanics	84	1.22	11	0.55	3	0.62	98	1.05
Asians	42	0.61	20	0.99	7	1.45	69	0.74
Am. Indians/ Alaskan Natives	5	0.07	2	0.10			7	0.07
1981-82								
TOTAL	7,253	75.66	1,868	19.49	465	4.85	9,586	100.00
Women	1,783	24.58	426	22.81	78	16.77	2,287	23.86
TOTAL MINORITY	157	2.16	32	1.71	13	2.80	202	2.11
Blacks	40	0.55	4	0.21			44	0.46
Hispanics	87	1.20	12	0.64	7	1.51	106	1.11
Asians	24	0.33	16	0.86	6	1.29	46	0.48
Am. Indians/ Alaskan Natives	6	0.08					6	0.06

FIELD: Geosciences

SOURCE: Student Enrollment in Geoscience Departments, 1981 through 1983, American Geological Institute

TABLE 6-39

ENROLLMENT IN GEOSCIENCE DEPARTMENTS BY EDUCATIONAL LEVEL, FIELD AND SEX, 1980-83

		FRESHMAN AND SOPHOMORE			JUNIOR			SENIOR			MASTER'S			DOCTORATES		
		1980-81	1981-82	1982-83	1980-81	1981-82	1982-83	1980-81	1981-82	1982-83	1980-81	1981-82	1982-83	1980-81	1981-82	1982-83
Geology	Total	9,113	10,390	9,943	7,511	8,009	8,574	8,423	8,756	10,210	4,883	5,060	5,007	1,257	1,116	1,150
	Women	2,114	2,307	2,263	1,817	2,013	2,122	2,059	2,151	2,557	1,164	1,249	1,270	245	223	250
	% W	23.2	22.2	22.8	24.2	25.1	24.7	24.4	24.6	25.0	23.8	24.7	25.4	19.5	20.0	21.7
Geophysics	Total	290	303	449	279	221	362	304	353	383	534	499	508	359	393	422
	Women	64	59	99	63	52	74	53	78	84	88	84	90	52	63	66
	% W	22.1	19.5	22.0	22.6	23.5	20.4	17.4	22.1	21.9	16.5	16.8	17.7	14.5	16.0	15.6
Oceanography, Marine Science	Total	453	487	507	188	198	227	240	202	226	781	740	781	681	699	677
	Women	87	112	110	40	30	49	56	36	43	227	218	216	142	160	169
	% W	19.2	23.0	21.7	21.3	15.1	21.6	23.3	17.8	19.0	29.1	29.5	27.7	20.9	22.9	25.0
Geological Engineering	Total	621	738	1,040	336	405	656	426	483	856	128	137	292	36	31	95
	Women	144	159	203	67	76	104	72	98	120	22	24	46	0	1	7
	% W	23.2	21.5	19.5	19.9	1.3	15.9	16.9	20.3	14.0	17.2	17.5	15.8	0.0	3.2	7.4
Geophysical Engineering	Total	96	110	151	60	80	73	79	94	104	92	84	78	8	18	17
	Women	21	23	35	14	20	10	14	14	23	13	11	13	0	0	1
	% W	21.9	20.9	23.2	23.3	25.0	13.7	17.7	14.9	22.1	14.1	13.1	16.7	0.0	0.0	5.9
Geochemistry	Total	17	25	7	17	27	14	25	22	18	226	182	124	180	195	169
	Women	1	5	0	0	3	3	9	4	3	67	50	42	33	45	42
	% W	5.9	20.0	0.0	0.0	11.1	21.4	36.0	18.2	16.7	29.7	27.5	33.9	18.3	13.1	24.9
Hydrology	Total	20	24	24	31	29	44	42	38	42	195	205	194	38	49	59
	Women	3	6	5	5	6	14	8	7	6	42	54	41	6	7	14
	% W	15.0	25.0	20.8	16.1	20.7	31.8	19.0	18.4	14.3	21.5	26.3	21.1	15.8	14.3	23.7
Mineralogy	Total	4	16	66	4	99	64	4	3	93	55	49	100	36	49	68
	Women	0	3	8	1	18	6	0	1	15	17	12	21	6	7	16
	% W	0.0	18.8	12.1	25.0	18.2	9.4	0.0	33.3	16.1	30.9	24.5	21.0	16.7	14.3	23.5
Paleontology	Total	8	25	9	13	89	22	8	21	13	120	94	87	96	105	83
	Women	1	7	2	5	19	5	1	6	4	43	31	26	22	31	24
	% W	12.5	28.0	22.2	38.5	21.3	22.7	12.5	28.6	30.8	35.8	33.0	29.9	22.9	29.5	28.9
Soil Science	Total	51	16	10	41	10	11	53	15	10	8	0	0	2	1	1
	Women	23	6	3	20	2	3	23	3	2	3	0	0	1	1	0
	% W	45.1	37.5	30.0	48.8	20.0	27.3	43.4	20.0	20.0	37.5	0.0	0.0	50.0	100.0	0.0
Environmental Science	Total	425	380	205	373	350	237	451	368	262	125	124	134	36	29	56
	Women	180	218	70	124	91	91	118	97	104	42	42	60	11	6	14
	% W	42.4	57.4	34.1	33.2	26.0	38.4	26.2	26.4	39.7	33.6	33.1	44.8	30.6	20.7	25.0
Earth Science, Teaching	Total	84	85	83	140	109	102	148	111	142	77	62	54	2	3	2
	Women	29	32	39	63	47	49	63	53	77	28	20	21	0	2	1
	% W	34.5	37.6	47.0	45.0	43.1	48.0	42.6	47.7	54.2	36.4	32.3	38.9	0.0	66.7	50.0
Earth Science, General	Total	613	639	653	461	433	459	535	580	542	146	113	152	79	71	98
	Women	166	183	158	117	127	132	176	179	138	38	30	23	12	12	17
	% W	27.1	28.6	24.2	25.4	29.3	28.8	32.9	30.9	25.5	26.0	26.5	15.1	15.2	16.9	17.3
ALL FIELDS	Total	11,795	13,238	13,147	9,454	10,059	10,845	10,738	11,046	12,901	7,370	7,349	7,511	2,810	2,759	2,897
	Women	2,833	3,120	2,995	2,336	2,504	2,662	2,652	2,727	3,176	1,794	1,825	1,869	530	558	621
	% W	24.0	23.6	22.8	24.7	24.9	24.5	24.7	24.7	24.6	24.3	24.8	24.9	18.9	20.2	21.4

FIELD: Geosciences

SOURCE: Unpublished data, American Geological Institute, October 1974 and Student Enrollment in Geoscience Departments 1975-76 to 1982-83, American Geological Institute

TABLE 6-40

STUDENT ENROLLMENT IN GEOSCIENCES, BY SEX 1972-73 TO 1982-83

Year	BACHELOR'S			MASTER'S			DOCTORATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
1972-73	19,541	2,994	15.3	4,832	646	13.4	3,045	242	7.9
1973-74	21,329	4,002	18.8	4,789	670	14.0	2,997	292	9.7
1975-76	18,439	3,913	21.2	4,588	832	18.1	2,042	221	10.8
1976-77	24,464	5,312	21.7	5,759	1,070	18.6	2,686	395	14.7
1977-78	25,399	5,672	22.3	6,245	1,209	19.4	2,598	351	13.5
1978-79	28,674	6,733	23.5	6,413	1,372	21.4	2,699	420	15.6
1979-80	30,495	7,390	24.2	7,004	1,616	23.1	2,877	492	17.1
1980-81	31,987	7,821	24.5	7,370	1,794	24.3	2,810	530	18.9
1981-82	34,343	8,351	24.3	7,349	1,825	24.8	2,759	558	20.2
1982-83	36,893	8,833	23.9	7,511	1,869	24.9	2,897	621	21.4

TABLE 6-41

STUDENT ENROLLMENT IN GEOSCIENCES, BY MINORITY STATUS, 1973-74 TO 1982-83

MINORITY STATUS	1973-74		1975-76		1977-78		1978-79		1979-80		1980-81		1981-82		1982-83	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hispanic																
Bachelor's	265	1.24	246	1.33	263	1.04	256	.89	353	1.16	381	1.19	453	1.32	406	1.10
Master's	21	.44	42	.91	22	.35	33	.51	56	.80	54	.73	64	.87	83	1.11
Doctorates	11	.37	9	.44	7	.27	8	.30	11	.38	23	.82	18	.65	28	.97
Total	297	1.02	297	1.18	292	.85	297	.79	420	1.04	458	1.09	535	1.20	517	1.09
Black																
Bachelor's	216	1.01	173	.93	155	.61	374	1.30	313	1.03	450	1.41	317	.92	245	.66
Master's	58	1.21	43	.93	27	.43	29	.45	29	.41	41	.56	40	.54	48	.64
Doctorates	6	.20	10	.48	3	.12	3	.11	7	.24	9	.32	5	.18	7	.24
Total	280	.96	226	.90	185	.54	406	1.07	349	.86	500	1.19	362	.81	300	.63
Asian/Pacific Islander																
Bachelor's	116	.54	76	.41	91	.36	111	.39	122	.40	170	.53	137	.40	151	.41
Master's	27	.56	44	.95	24	.38	44	.69	51	.73	107	1.45	94	1.28	107	1.42
Doctorates	18	.60	22	1.07	21	.81	18	.67	32	1.11	69	2.46	59	2.14	86	2.97
Total	161	.55	142	.56	136	.40	173	.46	205	.51	346	.82	290	.65	344	.73
Native American																
Bachelor's	33	.15	18	.09	31	.12	24	.08	41	.13	35	.11	31	.09	65	.18
Master's	5	.10	2	.04	3	.05	1	.003	2	.03	3	.04	3	.04	8	.11
Doctorates	1	.03	4	.19	3	.12	2	.07	3	.10	1	.04	3	.11	6	.21
Total	39	.13	24	.09	37	.11	27	.07	46	.11	39	.09	37	.08	79	.17

FIELD: Environmental Sciences

SOURCE: 1980 Census of Occupations, Special EEO File, Bureau of the Census

TABLE 6-42

ENVIRONMENTAL SCIENTISTS IN ACADEMIC AND NON-ACADEMIC EMPLOYMENT BY SEX AND RACE/ETHNICITY, 1980

	Total		Earth/Env/Marine Science Teachers		ALL OTHER					
					Geologists/ Geodicists		Survey/Mapping Scientists		Atmosp/Space Scientists	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	**88,450**	**100.00**	**2,274**	**100.00**	**46,127**	**100.00**	**31,634**	**100.00**	**8,415**	**100.00**
MALES	**80,188**	**90.66**	**1,904**	**83.73**	**40,985**	**88.05**	**30,313**	**95.82**	**6,986**	**83.02**
White*	75,268	85.10	1,827	80.34	38,969	84.48	28,089	88.79	6,383	75.85
Black*	1,492	1.69	10	0.44	488	1.06	713	2.25	281	3.34
Indian/Alaskan Native*	414	0.47	5	0.22	85	0.18	279	0.88	45	0.53
Asian/Pacific Isl. *	987	1.12	38	1.67	621	1.35	222	0.70	106	1.26
Other Race*	100	0.11	12	0.53	46	0.10	16	0.05	26	0.31
Hispanic	1,927	2.23	12	0.53	776	1.68	994	3.14	145	1.72
FEMALES	**8,262**	**9.34**	**370**	**16.27**	**5,142**	**11.15**	**1,321**	**4.18**	**1,429**	**16.98**
White*	7,502	8.48	342	15.04	4,768	10.34	1,173	3.71	1,219	14.49
Black*	378	0.43	0	0.00	205	0.44	44	0.14	129	1.53
Indian/Alaskan Native*	25	0.03	0	0.00	10	0.02	13	0.04	2	0.02
Asian/Pacific Isl. *	136	0.15	9	0.40	91	0.20	10	0.03	26	0.31
Other Race*	13	0.01	0	0.00	5	0.01	8	0.03	0	0.00
Hispanic	208	0.24	19	0.84	63	0.14	73	0.23	53	0.63

* Non-Hispanic

FIELD: Mathematics

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973. Doctorate Recipients from United States Universities Summary Report 1972 through 1983, National Research Council

TABLE 6-43

DOCTORATES AWARDED FROM 1920 TO 1983 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978-FY1981			FY1982			FY1983		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
MATHEMATICS SUBTOTAL	14,353	1,001	7.0	5,529	1,475	26.7	3,079	445	14.5	720	96	13.3	701	113	16.1
Algebra	1,603	154	9.6	594	111	18.7	306	68	22.2	60	12	20.0	55	8	14.5
Analysis & Functional Analysis[1]	2,641	144	5.5	930	88	9.5	425	43	10.1	98	15	15.3	76	8	10.5
Geometry	396	41	10.4	145	16	11.0	111	9	8.1	32	2	6.3	44	6	13.6
Logic	306	25	8.2	143	16	11.0	87	7	8.0	17	0	-	21	2	9.5
Number Theory	296	39	13.2	139	16	11.5	87	6	6.9	28	4	14.3	19	4	21.1
Probability, Math. Statistics[2]	1,410	82	5.8	804	88	10.9	648	120	18.5	165	29	17.6	151	27	17.9
Topology	1,128	55	4.9	459	46	10.0	228	31	13.6	45	5	11.1	44	9	20.5
Topological Algebraic Structure[3]	176	4	2.3												
Operations Research[4]				78	6	7.7	162	18	11.1	36	5	13.9	20	5	25.0
Computing Theory & Practice[5]	676	22	3.3	830	69	8.3	109	15	13.8	11	0	-	12	2	16.7
Applied Math	1,424	52	3.7	575	29	5.0	401	57	14.2	107	10	9.3	125	21	16.8
Mathematics, General[6]	1,508	174	11.5	502	55	11.0	336	47	14.0	85	7	8.2	86	8	9.3
Mathematics, Other	2,789	209	7.5	251	41	16.3	141	24	17.0	36	7	19.4	48	13	27.1

1 Specified as "Analysis" through FY 1967, "Functional Analysis" was added in FY 1968.
2 "Math Statistics" was removed from the specification in 1968, but it was added again in 1971.
3 This specification was dropped in 1966.
4 Added in 1976.
5 Added in 1960.
6 Subfields were not specified until FY 1958. Except for a few cases in earlier years all doctorates were included in the "general" classification of their respective fields.

FIELD: Mathematical Sciences

SOURCE: "Report on the 1983 Survey of New Doctorates," by Donald C. Rung, The American Mathematical Society Notices, Vol. 30, No. 7

TABLE 6-44

SEX, MINORITY GROUP, AND CITIZENSHIP OF NEW DOCTORATES IN THE MATHEMATICAL SCIENCES, July 1, 1982 - June 30, 1983

U.S. DEGREES	MEN					WOMEN					TOTAL
	CITIZENSHIP					CITIZENSHIP					
RACIAL/ETHNIC GROUP	U.S.	Canada	Other	Not Known	Total Men	U.S.	Canada	Other	Not Known	Total Women	
Asian, Pacific Islander	14	1	104	3	122	4		13	1	18	140
Black	1		2		3	5				5	8
Am. Indian, Eskimo, Aleut						1				1	1
Mexican American, Chicano, Puerto Rican	2		4		6			1		1	7
None of those above	318	13	120	2	453	73	2	17		92	545
Unknown	31		11		42	6		1		7	49

FIELD: Mathematical Sciences

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and 1980-1983 Summary Report, Doctorate Recipients from United States Universities, National Research Council, 1981-1984

TABLE 6-45

NUMBER OF Ph.D. RECIPIENTS IN THE MATHEMATICAL SCIENCES BY TYPE OF CITIZENSHIP, 1960-1983

YEAR	TOTAL	U.S.	FOREIGN			Citizenship not Known
			TOTAL	Immigrants	Non-Immigrants	
1960	291	233	55	11	44	3
1961	332	272	51	7	44	9
1962	388	312	72	7	65	4
1963	483	401	72	11	61	10
1964	588	489	89	9	80	10
1965	685	578	92	16	76	15
1966	769	634	119	22	97	16
1967	830	692	119	27	92	19
1968	970	798	154	42	112	18
1969	1,065	887	183	49	114	15
1970	1,224	1,018	191	57	134	15
1971	1,238	1,012	214	62	152	12
1972	1,281	1,030	234	65	169	17
1973	1,232	951	254	81	173	27
1974	1,208	873	295	71	224	40
1975	1,147	848	272	75	197	27
1976	1,003	748	238	55	183	17
1977	959	710	224	54	170	25
1978	959	704	233	52	181	22
1979	977	712	244	63	181	21
1980	963	676	258	76	182	29
1981	960	648	289	63	226	23
1982	720	458	233	41	192	29
1983	701	411	255	46	209	35

FIELD: Computer Sciences

SOURCE: Earned Degrees Conferred Series, 1964-65 thru 1981-82
U.S. Office of Education (NCES)

TABLE 6-46

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1964-65 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1964-65 thru 1969-70	3,334	416	12.5	3,852	287	7.5
1970-71	1,624	236	14.5	1,588	164	10.3
1971-72	3,402	461	13.5	1,977	225	11.4
1972-73	4,305	640	14.9	2,113	225	10.6
1973-74	4,757	780	16.4	2,276	293	12.8
1974-75	5,039	956	18.9	2,299	338	14.7
1975-76	5,664	1,124	19.8	2,603	377	14.5
1976-77	6,407	1,531	23.9	2,798	466	16.7
1977-78	7,224	1,864	25.8	3,038	567	18.7
1978-79	8,769	2,463	28.1	3,055	575	18.8
1979-80	11,213	3,399	30.3	3,647	764	20.9
1980-81	15,121	4,919	32.5	4,218	971	23.0
1981-82	20,267	7,049	34.8	4,935	1,310	26.5
TOTAL	97,126	25,838	26.6	38,399	6,562	17.1

SOURCE: Earned Degrees Conferred Series, 1947-48 through 1981-82, U.S. Office of Education (NCES)

TABLE 6-47

DOCTORAL DEGREES BY SEX, 1964-65 - 1981-82

YEAR	Total Both Sexes	Women Only	% Women
1964-65 thru 1969-70	269	6	2.2
1970-71	128	3	2.3
1971-72	167	12	7.2
1972-73	196	15	7.7
1973-74	198	9	4.5
1974-75	213	14	6.6
1975-76	244	23	9.4
1976-77	216	19	8.8
1977-78	196	15	7.7
1978-79	209	27	12.9
1979-80	240	27	11.3
1980-81	252	25	9.9
1981-82	251	21	8.4
TOTAL	**2,779**	**216**	**7.8**

FIELD: Mathematics

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 6-48

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S*			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	75,934	22,122	29.1	12,483	2,470	19.8
1960-61 thru 1969-70	199,682	68,253	34.2	39,445	9,390	23.8
1970-71	24,701	9,439	38.2	4,706	1,425	30.3
1971-72	23,680	9,276	39.2	4,793	1,467	30.6
1972-73	23,003	9,264	40.3	4,603	1,409	30.6
1973-74	21,556	8,845	41.0	4,387	1,392	31.7
1974-75	18,133	7,632	42.1	3,893	1,319	33.9
1975-76	15,787	6,462	40.9	3,392	1,202	35.4
1976-77	13,906	5,767	41.5	3,222	1,169	36.3
1977-78	12,428	5,139	41.4	2,876	1,016	35.3
1978-79	11,901	4,958	41.7	3,046	1,057	34.7
1979-80	11,226	4,744	42.3	2,373	903	38.1
1980-81	10,852	4,641	42.8	2,100	731	34.8
1981-82	11,341	4,900	43.2	2,248	761	33.9
TOTAL	474,130	171,442	36.2	93,567	25,711	27.5

*Includes Statistics until 1955-56

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1983, National Research Council

TABLE 6-49

DOCTORAL DEGREES BY SEX, 1920-1983

YEAR	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	4,213	368	8.7
FY 1960 thru FY 1969	6,401	364	5.7
FY 1970 thru FY 1972	3,739	269	7.2
FY 1973	1,222	119	9.7
FY 1974	1,196	115	9.6
FY 1975	1,149	110	9.6
FY 1976	1,003	113	11.3
FY 1977	959	128	13.3
FY 1978	838	120	14.3
FY 1979	768	118	15.4
FY 1980	745	95	12.8
FY 1981	728	112	15.4
FY 1982	720	96	13.3
FY 1983	701	113	16.1
TOTAL	**24,382**	**2,240**	**9.2**

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Statistics

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 6-50

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru + 1959-60	344	78	22.7	506	56	11.1
1960-61 thru 1969-70	2,355	377	16.0	3,507	513	14.6
1970-71	217	55	25.3	495	99	20.0
1971-72	168	47	27.9	416	85	20.4
1972-73	198	69	34.8	402	91	22.6
1973-74	257	94	36.6	453	108	23.8
1974-75	213	68	31.9	449	109	24.1
1975-76	258	92	35.7	471	111	23.6
1976-77	290	126	43.4	473	130	27.5
1977-78	273	107	39.2	507	134	26.4
1978-79	214	82	38.3	532	152	28.6
1979-80	247	104	42.1	495	133	26.9
1980-81	226	95	42.0	467	144	30.8
1981-82	258	106	41.1	479	145	30.3
TOTAL	5,518	1,483	26.9	9,652	2,010	20.8

+ Data begins for 1955-56 when identified as a separate field.

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82, U.S. Office of Education (NCES)

TABLE 6-51

DOCTORAL DEGREES BY SEX, 1955-56 - 1981-82

YEAR	TOTAL BOTH SEXES	WOMEN ONLY	% WOMEN
1955-56 thru 1959-60	170	6	3.5
1960-61 thru 1969-70	965	71	7.4
1970-71	185	12	6.5
1971-72	173	12	6.9
1972-73	156	17	10.9
1973-74	147	10	6.8
1974-75	158	16	10.1
1975-76	141	16	11.3
1976-77	142	23	16.2
1977-78	153	32	20.9
1978-79	142	30	21.1
1979-80	115	24	20.9
1980-81	144	22	15.3
1981-82	125	25	20.0
TOTAL	2,916	316	10.8

FIELD: Mathematics

SOURCE: The American Mathematical Society NOTICES, Vol. 25, No. 6, Issue No. 188, October 1978; Vol. 29, No. 7, Issue 221, November 1982; Vol. 30, No. 7, Issue No. 229, November 1983

TABLE 6-52

NUMBER AND PERCENT OF DOCTORAL FACULTY IN DOCTORATE GRANTING DEPARTMENTS BY SEX, RANK, TYPE OF INSTITUTION AND TENURE, 1978-79, 1982-83 AND 1983-84

TYPE OF INSTITUTION	DOCTORAL DEGREE RANK	1978 - 1979						1982 - 1983						1983 - 1984					
		No. of Faculty			Tenured Faculty			No. of Faculty			Tenured Faculty			No. of Faculty			Tenured Faculty		
		Total	W	% W	Total	W	% W	Total	W	% W	Total	W	% W	Total	W	% W	Total	W	% W
Doctorate Granting Departments Group I	Instructor	71	5	7.0	2	0	0.0	94	11	11.7	2	0	0.0	88	11	12.5	12	0	0.0
	Ass't. Prof.	149	14	9.4	3	1	33.3	195	16	8.2	4	0	0.0	195	14	7.2	3	0	0.0
	Assoc. Prof.	142	7	4.9	131	7	5.3	168	9	5.4	160	9	5.6	152	9	5.9	141	8	5.7
	Professor	535	10	1.9	534	10	1.9	731	20	2.7	731	20	2.7	752	22	2.9	752	22	2.9
Doctorate Granting Departments Group II	Instructor	74	9	12.2	2	0	0.0	37	9	24.3	0	0	0.0	38	6	15.8	38	0	0.0
	Ass't. Prof.	244	20	8.2	9	2	22.2	240	27	11.3	17	4	23.5	245	27	11.0	245	5	2.0
	Assoc. Prof.	333	14	4.2	321	13	4.0	344	22	6.4	327	18	5.5	336	26	7.7	336	21	6.3
	Professor	446	13	2.9	444	13	2.9	491	12	2.4	491	12	2.4	508	12	2.4	508	12	2.4
Doctorate Granting Departments Group III	Instructor	39	4	10.3	1	1	100.0	19	1	5.3	0	0	0.0	23	4	17.4	23	0	0.0
	Ass't. Prof.	415	46	11.1	60	4	6.7	259	28	10.8	23	2	8.7	263	29	11.0	263	3	1.1
	Assoc. Prof.	664	26	3.9	633	23	3.6	346	19	5.5	303	16	5.3	340	22	6.5	340	19	5.6
	Professor	719	21	2.9	712	21	2.9	456	10	2.2	437	10	2.3	473	11	2.3	473	11	2.3
Doctorate Granting Departments Group IV	Instructor	19	2	10.5	1	0	0.0	4	3	75.0	1	1	100.0	6	3	50.0	6	1	16.7
	Ass't. Prof.	6	1	16.7	2	1	50.0	151	23	15.2	5	1	20.0	157	20	12.7	157	1	0.6
	Assoc. Prof.	4	1	25.0	3	1	33.3	106	9	8.5	75	5	6.7	116	10	8.6	116	5	4.3
	Professor	4	0	0.0	4	0	0.0	267	10	3.8	261	10	3.8	272	10	3.9	272	10	3.7
Doctorate Granting Departments Group V	Instructor	18	2	11.1	1	1	100.0	1	1	100.0	0	0	0.0	1	1	100.0	1	0	0.0
	Ass't. Prof.	2	0	0.0	1	0	0.0	26	3	11.5	0	0	0.0	28	4	14.3	28	0	0.0
	Assoc. Prof.	2	1	50.0	1	0	0.0	17	1	5.9	13	1	7.7	16	0	0.0	16	0	0.0
	Professor	6	0	0.0	5	0	0.0	49	1	2.0	47	1	2.1	51	2	3.9	51	2	3.9
Doctorate Granting Departments Group VI	Instructor	11	2	18.2	0	0	0.0	4	2	50.0	0	0	0.0	2	0	0.0	2	0	0.0
	Ass't. Prof.	23	9	39.1	18	9	50.0	44	8	18.9	16	4	25.0	44	6	13.6	44	2	4.6
	Assoc. Prof.	24	2	8.3	22	2	9.1	138	5	3.6	137	5	3.7	134	7	5.2	134	7	5.2
	Professor	10	0	0.0	10	0	0.0	150	1	0.7	150	1	0.7	164	1	0.6	164	1	0.6
All Doctorate Granting Departments	Instructor	232	24	10.3	7	2	28.6	159	27	17.0	3	1	33.3	158	25	15.8	82	1	1.2
	Ass't. Prof.	839	90	10.7	98	17	17.3	915	105	11.5	65	11	16.9	932	100	10.7	740	11	1.5
	Assoc. Prof.	1,169	51	4.4	1,111	45	4.1	1,119	65	5.8	1,015	54	5.3	1,094	74	6.8	1,083	60	5.5
	Professor	1,720	44	2.6	1,709	44	2.6	2,144	54	2.5	2,117	54	2.6	2,220	58	2.6	2,220	58	2.6
All Doctorate Departments All Ranks		3,960	209	5.3	2,925	108	3.7	4337	251	5.8	3,200	111	3.5	4,740	257	5.4	4,125	130	3.2

*Numbers reported are totals for institutions responding to the survey and do not represent total faculty.

FIELD: Mathematics

SOURCE: The American Mathematical Society NOTICES, Vol. 25, No. 6, Issue No. 188, October 1978; Vol. 29, No. 7, Issue 221, November 1982; Vol. 30, No. 7, Issue No. 229, November 1983

TABLE 6-53

NUMBER AND PERCENT OF DOCTORAL FACULTY IN NON-DOCTORATE GRANTING DEPARTMENTS BY SEX, RANK, TYPE OF INSTITUTION AND TENURE, 1978-79, 1982-83 AND 1983-84*

TYPE OF INSTITUTION	DOCTORAL DEGREE RANK	1978 - 1979						1982 - 1983						1983 - 1984					
		No. of Faculty			Tenured Faculty			No. of Faculty			Tenured Faculty			No. of Faculty			Tenured Faculty		
		Total	W	% W	Total	W	% W	Total	W	% W	Total	W	% W	Total	W	% W	Total	W	% W
MASTER'S DEGREE																			
Without Doctorate	Instructor	227	110	48.6	42	16	38.1	220	123	55.9	20	11	55.0	227	129	56.8	21	11	52.4
	Ass't. Prof.	300	68	22.7	277	59	21.3	210	53	25.2	173	36	20.8	212	51	24.1	171	38	22.2
	Assoc. Prof.	221	27	12.2	219	27	12.3	129	24	18.6	127	24	18.9	122	24	19.7	121	24	19.8
	Professor	60	4	6.7	60	4	6.7	32	4	12.5	32	4	12.5	35	4	11.4	35	4	11.4
With Doctorate	Instructor	34	9	26.5	0	0	0.0	27	4	14.8	1	0	0.0	31	8	25.8	2	1	50.0
	Ass't. Prof.	553	69	12.5	139	14	10.1	439	81	18.5	69	14	20.3	476	79	16.6	64	13	20.3
	Assoc. Prof.	889	59	6.6	816	353	6.5	680	69	10.1	594	60	10.1	686	75	10.9	599	62	10.4
	Professor	706	41	5.8	699	40	5.7	712	49	6.9	696	45	6.5	741	54	7.3	726	53	7.3
BACHELOR'S DEGREE																			
Without Doctorate	Instructor	182	73	40.1	16	8	50.0	265	140	52.8	8	3	37.5	293	158	53.9	9	4	44.4
	Ass't. Prof.	251	65	25.9	154	32	20.8	206	61	29.6	98	29	29.6	219	60	27.4	88	24	27.3
	Assoc. Prof.	230	30	13.0	216	28	13.0	165	22	13.3	152	22	14.5	159	26	16.4	141	24	17.0
	Professor	70	8	11.4	67	8	11.9	53	5	9.4	51	5	9.8	51	4	7.8	48	4	8.3
With Doctorate	Instructor	19	6	31.6	1	0	0.0	19	2	10.5	3	0	0.0	17	1	5.9	3	0	0.0
	Ass't. Prof.	438	55	12.6	76	6	7.9	381	77	20.2	53	5	9.4	415	97	23.4	53	7	13.2
	Assoc. Prof.	505	55	10.9	428	45	10.5	435	39	9.0	335	22	6.6	440	42	9.5	341	29	8.5
	Professor	432	36	8.3	411	36	8.8	440	43	9.8	422	41	9.7	477	43	9.0	446	38	8.5
ALL INSTITUTIONS**																			
Without Doctorate		1,861	475	25.5	1,247	233	18.7	1,580	552	34.9	773	161	20.8	1,588	567	35.7	741	158	21.3
With Doctorate		8,993	599	6.7	6,534	323	4.9	7,470	615	8.2	5,373	307	5.7	7,687	656	8.5	5,481	333	6.1
TOTAL		10,854	1,074	9.9	7,781	556	7.1	9,050	1,167	12.9	6,146	468	7.6	9,275	1,223	13.2	6,222	491	7.9

* Number of institutions reporting varies from year to year in all types of institutions. Numbers reported do not represent total faculty.

**Includes information on doctorate granting institutions shown in preceding Table.

FIELD: Mathematics

SOURCE: 1980 Census of Occupations, Special EEO File, Bureau of the Census

TABLE 6-54

MATHEMATICIANS IN ACADEMIC AND NON-ACADEMIC EMPLOYMENT BY SEX AND RACE/ETHNICITY, 1980

	Total		Math & Science Teachers*		ALL OTHER					
					Math Scientists		Statisticians		Actuaries	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	63,617	100.00	16,697	100.00	6,401	100.00	30,200	100.00	10,319	100.00
MALES	39,944	62.79	11,390	68.22	5,188	81.05	15,684	51.93	7,682	74.45
White*	35,571	55.91	10,004	59.91	4,576	71.49	13,711	45.40	7,280	70.55
Black*	1,621	2.55	496	2.97	248	3.87	786	2.60	91	0.88
Indian/Alaskan Native*	124	0.19	58	0.35	25	0.39	41	0.14	0	0.00
Asian/Pacific Isl.*	1,699	2.67	507	3.04	200	3.12	733	2.43	259	2.51
Other Race*	42	0.07	14	0.08	7	0.11	15	0.05	6	0.06
Hispanic	847	1.33	311	1.86	132	2.06	398	1.32	46	0.45
FEMALES	23,673	37.21	5,307	31.78	1,213	18.95	14,516	48.07	2,637	25.55
White*	19,868	31.23	4,555	27.28	959	14.98	11,917	39.46	2,437	23.62
Black*	2,306	3.62	438	2.62	179	2.80	1,595	5.28	94	0.91
Indian/Alaskan Native*	64	0.10	7	0.04	0	0.00	57	0.19	0	0.00
Asian/Pacific Isl.*	856	1.35	221	1.32	60	0.94	497	1.65	78	0.76
Other Race*	16	0.03	5	0.03	0	0.00	11	0.04	0	0.00
Hispanic	563	0.88	81	0.49	15	0.23	439	1.45	28	0.27

* Non-Hispanic

SOURCE: Projections of Educational Statistics to 1988-89, National Center for Education Statistics; Earned Degrees Conferred Series, 1970 thru 1982, National Center for Education Statistics

TABLE 6-55

DEGREES IN MATHEMATICS/STATISTICS AND COMPUTER SCIENCES 1970-1982 PROJECTED TO 1989

	Bachelor's Degrees				Master's Degrees				Ph.D.s			
	Math & Statistics		Computer Science		Math & Statistics		Computer Science		Math & Statistics		Computer Science	
Year	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W
1970	27,442	37.4	1,544	12.9	5,636	29.6	1,459	9.3	1,236	7.8	107	1.9
1971	24,801	38.0	1,624	14.5	5,191	29.2	1,588	10.3	1,199	7.8	128	2.3
1972	23,713	39.0	3,402	13.5	5,198	29.7	1,977	11.4	1,128	7.9	167	7.2
1973	23,067	40.2	4,305	14.9	5,028	29.9	2,113	10.6	1,068	9.6	196	7.7
1974	21,635	40.9	4,757	16.4	4,834	31.0	2,276	12.9	1,031	9.7	198	4.5
1975	18,181	41.8	5,039	18.9	4,327	32.9	2,299	14.7	975	11.3	213	6.6
1976	15,984	40.7	5,664	19.8	3,857	34.0	2,603	14.5	856	11.0	244	9.4
1977	14,196	41.5	6,407	23.9	3,695	35.2	2,798	16.7	823	13.2	216	8.8
1978	12,569	41.4	7,224	25.8	3,373	33.9	3,038	18.7	805	15.4	196	7.7
1979	12,115	41.6	8,769	28.1	3,578	33.8	3,055	18.8	933	16.0	209	12.9
1980	11,473	42.3	11,213	30.3	2,868	36.1	3,647	20.9	724	13.8	240	11.3
1981	11,078	42.8	15,121	32.5	2,567	34.1	4,218	23.0	728	15.7	252	9.9
1982	11,599	43.2	20,267	34.8	2,727	33.9	4,935	26.5	681	13.8	251	8.4
Projected												
1981	8,120	38.4	8,730	25.4	2,540	37.0	3,580	22.9	700	17.1	190	10.5
1982	7,940	38.8	9,130	26.4	2,550	36.5	3,840	23.4	650	18.5	180	11.1
1983	7,960	39.2	9,660	25.4	2,550	36.1	4,050	23.7	630	17.5	180	11.1
1984	7,940	39.8	9,810	25.1	2,550	35.7	4,180	22.7	620	17.7	180	11.1
1985	7,900	40.4	9,830	26.9	2,560	35.2	4,340	21.7	610	18.0	170	11.8
1986	8,020	42.3	9,800	28.0	2,540	35.4	4,320	21.8	600	18.3	170	11.8
1987	8,000	43.3	9,780	28.7	2,530	35.6	4,280	21.7	580	17.2	170	11.8
1988	8,100	44.7	9,940	29.3	2,460	34.6	4,200	21.2	570	17.5	160	12.5
1989	8,180	45.7	10,110	29.0	2,420	34.3	4,140	21.0	550	16.4	160	12.5

FIELD: Mathematics, Statistics and Computer Specialties

SOURCE: Federal Civilian Workforce Statistics, Affirmative Employment Statistics, U.S. Office of Personnel Management, CIG-82-71, September 30, 1982

TABLE 6-56

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN MATHEMATICS, STATISTICS AND COMPUTER SPECIALTIES BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 30, 1982

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		AM. INDIAN		ASIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% I	No.	% A	No.	% W
Actuary	122	19	15.6	15	12.3	4	3.3	6	4.9	6	4.9	0	0.0	3	2.5	107	87.7
Operations Research	3,540	422	11.9	302	8.5	53	1.5	140	4.0	70	2.0	12	0.3	80	2.3	3,238	91.5
Mathematics	3,716	885	23.8	459	12.4	150	4.0	267	7.2	92	2.5	9	0.2	91	2.4	3,257	87.6
Mathematics Technician	183	110	60.1	25	13.7	9	4.9	12	6.6	5	2.7	0	0.0	8	4.4	0	0.0
Mathematics Statistician	962	216	22.5	143	14.9	50	5.2	60	6.2	16	1.7	2	0.2	65	6.8	819	85.1
Statistican	2,601	764	29.4	386	14.8	200	7.7	273	10.5	48	1.8	4	0.2	61	2.3	2,215	85.2
Statistical Assistant Tech.	54	37	68.5	21	38.9	19	35.2	20	37.0	1	1.9	0	0.0	0	0.0	33	61.1
Statistical Ass't (Clerical)	876	766	87.4	399	45.5	359	41.0	374	42.7	9	1.0	4	0.5	12	1.4	477	54.5
Digital Computer Sys. Admin.	586	81	13.8	59	10.1	12	2.0	40	6.8	8	1.4	2	0.3	9	1.5	527	89.9
Computer Science	777	181	23.3	65	8.4	19	2.4	27	3.5	9	1.2	2	0.3	27	3.5	712	91.6
Computer Operation	10,227	4,556	44.5	3,617	35.4	1,875	18.3	2,774	27.1	471	4.6	111	1.1	261	2.6	6,610	64.6
Computer Specialist	31,745	8,407	26.5	4,486	14.1	1,734	5.5	3,126	9.8	615	1.9	140	0.4	605	1.9	27,259	85.9

SOURCE: "Report on the 1983 Survey of New Doctorates," by Donald C. Rung, The American Mathematical Society Notices, Vol. 30, No. 7

TABLE 6-57

U.S. CITIZEN DOCTORATES IN THE MATHEMATICAL SCIENCES BY SEX, 1972-73 - 1982-83

YEAR	ADJUSTED TOTAL*	U. S. CITIZENS				
		TOTAL	%	MEN	WOMEN	% W
1972-73	986	774	78.5	696	78	10.1
1973-74	938	677	72.2	618	59	8.7
1974-75	999	741	74.2	658	83	11.2
1975-76	965	722	74.	636	86	11.9
1976-77	901	689	76.5	602	87	12.6
1977-78	868	634	73.0	545	89	14.0
1978-79	806	596	73.9	503	93	15.6
1979-80	791	578	73.1	491	87	15.1
1980-81	839	567	67.6	465	102	18.0
1981-82	798	519	65.0	431	88	17.0
1982-83†	744	455	61.2	366	89	19.6

*Includes only those for whom citizenship is known.

†Does not include Computer Science degrees.

CHAPTER 7

ENGINEERING, TECHNOLOGY AND TECHNICIANS

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FIELD: Engineering

SOURCE: Estimates derived from tables throughout Professional Women and Minorities - Summary Table

TABLE 7-1

PROPORTION OF WOMEN AND MINORITIES IN ENGINEERING POPULATIONS

	Women		Blacks		Hispanic		American Indian		Asian		Foreign Nationals		White, Non-Hispanic Males	
Enrollments (Fall of)	**1969**	**1983**	**1969**	**1983**	**1973**	**1983**	**1973**	**1983**	**1973**	**1983**	**1973**	**1983**	**1973**	**1983**
First Year	1.6	17.0	1.3	5.8	2.9	4.3	0.1	0.3	1.7	4.5	NA	4.8	86.5	63.2
Undergraduate Total Full Time	1.3	15.9	1.2	4.4	3.2	3.7	0.2	0.3	2.0	5.1	NA	6.2	88.4	64.4
Graduate Total Full Time	2.1	11.3	0.2	1.4	0.8	1.3	0.1	0.1	2.5	6.3	27.6	35.1	65.4	44.5
DEGREES	**1960-76**	**1983**	**1969-77**	**1983**	**1973-77**	**1983**	**1973-77**	**1983**	**1973-77**	**1983**	**1973-77**	**1983**	**1973-77**	**1983**
Bachelor's	1.2	13.2	1.5	2.6	2.5	2.6	0.1	0.1	2.4	4.3	6.6	8.5	86.7	68.7
Master's	1.4	9.1	0.6	1.3	1.1	1.6	0.05	0.1	3.2	6.5	20.4	25.9	74.6	55.6
Doctorate	1.0	4.7	0.3	0.6	0.6	1.4	0.03	0.0	4.0	5.7	30.9	39.4	64.2	48.2
General Workforce	**1960**	**1983**	**1970**	**1983**	**1970**	**1983**	**1970**	**1980**	**1970**	**1980**			**1970**	**1980**
	0.8	5.8	1.0	2.7	1.4	2.2	0.03	0.21	1.5	4.34			96.1	86.7
Academic Workforce	**1972**	**1983**		**1980**		**1980**		**1980**		**1980**				**1980**
	0.4	3.9		3.4		2.0		0.4		4.8				88.6
Federal Workforce	**1974**	**1982**	**1974**	**1982**	**1974**	**1982**	**1974**	**1982**	**1974**	**1979**			**1974**	**1982**
	0.6	2.7	1.7	2.4	1.0	2.4	0.2	0.4	1.3	2.6			95.8	87.4
Doctoral Population	**1973**	**1981**	**1973**	**1981**	**1973**	**1981**	**1973**	**1981**	**1973**	**1982**		**1981**	**1973**	**1981**
	0.4	1.3	0.3	0.5	0.4	1.3	0.1	0.6	9.2	4.7		10.4	89.6	68.3

See also sections on Enrollments, Degrees, General Workforce and Academic Workforce.

FIELD: Engineering

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1983, National Research Council

TABLE 7-2

DOCTORATES AWARDED FROM 1920 TO 1983 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978-FY1981			FY1982			FY1983		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Engineering Subtotal	37,709	164	0.4	14,921	256	1.7	9,924	305.5	3.1	2,644	124	4.7	2,780	124	4.5
Aeronautical & Astron. Eng.[1]	1,827	13	0.7	696	10	1.4	362	2	0.6	85	1	1.2	106	2	1.9
Agricultural Engineering	588	0	0.0	257	2	0.8	239	3	1.3	48	2	4.2	58	1	1.7
Biomedical Engineering[2]	230	0	0.0	356	9	2.5	279	7	2.5	59	6	10.2	73	8	10.9
Civil Engineering	3,433	11	0.3	1,561	24	1.5	998	20	2.0	308	12	3.9	354	12	3.4
Chemical Engineering	6,002	27	0.4	1,802	32	1.8	1,129	38	3.4	306	17	5.6	349	22	6.3
Ceramic Engineering	552	5	0.9	126	6	4.8	96	4	4.2	20	1	5.0	24	3	12.5
Communications Engineering[3]													25	0	
Engineering Science[3]													30	1	3.3
Environmental Health Engineering[3]													43	1	2.3
Electrical Engineering[4]	7,389	22	0.3	2,783	34	1.2	1,677	43	2.6	469	17	3.6			
Electronics Engineering[4]	1,419	7	0.5	436	4	0.9	276	13	4.7	73	2	2.7	517	7	1.4
Industrial Engineering	914	7	0.8	434	12	2.8	277	21	7.6	79	6	7.6	86	6	7.0
Nuclear Engineering[5]	473	2	0.4	569	9	1.6	443	14	3.2	121	7	14.3	103	5	4.9
Engineering Mechanics[5]	952	1	0.1	714	12	1.7	349	6	1.7	103	5	4.9	68	2	2.9
Engineering Physics[5]	1,689	10	0.6	118	2	1.7	72	3	4.2	12	0	0.0	10	0	0.0
Mechanical Engineering	4,279	6	0.1	1,638	14	0.9	1,138	15	1.3	333	12	3.6	311	6	1.9
Metallurgical Engineering[6]	2,991	15	0.5	602	7	1.2	391	14	3.5	88	3	3.4	87	5	5.7
Naval Arch., Marine Engineering[3]													4	0	0.0
Ocean Engineering[3]													12	0	0.0
Polymer Engineering[3]													21	1	4.8
Sanitary & Environmental Eng.[7]	596	2	0.3	216	3	1.4	270	13	4.8	60	5	8.3			
Mining & Mineral Engineering[8]	51	0	0.0	29	0	0.0	23	0	0.0	7	1	14.3	22	1	4.5
Material Science Engineering[9]	197	0	0.0	630	21	3.3	505	26	5.1	147	13	8.8	157	22	14.0
Operations Research[10]	0	0	0.0	477	11	2.3	263	19	7.2	58	5	8.6	44	5	11.4
Fuel Tech., Petroleum Engineering[10]	0	0	0.0	126	7	5.6	95	1	1.1	27	2	7.4	22	0	0.0
Computer Engineering[11]	0	0	0.0	342	24	7.0	288	21	7.3	72	3	4.2	83	6	7.2
Systems Design /Systems Sci.[12]	0	0	0.0	165	2	1.2	267	13	4.9	49	2	4.1	57	3	5.3
Engineering, General[13]	283	1	0.3	194	3	1.5	156	9	5.8	32	1	3.1	30	1	3.3
Engineering, Other	3,138	27	0.7	852	18	2.1	298	10	3.4	88	1	1.1	84	4	4.8

[1] Originally specified as "Aeronautical". In 1966, "Astronautical" was added. [2] Added in 1968. [3] Added in 1983. [4] Combined in 1983. [5] In 1960, "Nuclear Engineering" was dropped and previous cases were added to "Engineering Physics". It was added again as a separate field in 1968. [6] Originally specified as "Metallurgy & Met. Eng." Added "Phys." in 1966, renamed in 1983. [7] "Environmental" added in 1977. Dropped in 1983. [8] Dropped in 1960. Previous cases were added to "Engineering Other". [9] Added in 1971. [10] Added in 1973, as "Fuel Technology & Petroleum". Renamed in 1983. [11] Added in 1975. [12] Added in 1979. [13] Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "General" classification of their respective fields.

FIELD: Engineering

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1983, National Research Council

TABLE 7-3

DOCTORATES AWARDED FROM 1920 TO 1983 BY SUBFIELD OF ENGINEERING AND SEX

FIELD	CY 1920-FY 1959*	FY 1960-FY 1969	FY 1970-74	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981	FY 1982	FY 1983	Total 1920-83
Aeronautical													
Total	298	948	899	141	122	115	103	81	81	97	85	106	3,076
Women	2	6	8	2	0	3	1	0	1	0	1	2	28
% Women	0.67	0.63	0.89	1.42		2.61	0.97		1.23		1.18	1.19	
Chmaical													
Total	1,811	2,971	2,032	370	314	306	261	287	285	296	306	349	9,588
Women	3	17	19	4	7	9	5	8	14	11	17	22	136
% Women	0.17	0.57	0.94	1.08	2.23	2.94	1.91	2.79	4.91	3.72	5.56	6.30	1.42
Civil													
Total	464	1,919	1,739	290	314	268	236	236	239	287	308	354	6,931
Women	1	7	13	3	4	7	6	2	6	6	12	12	79
% Women	0.22	0.36	0.75	1.03	1.27	2.61	2.54	0.85	2.51	2.09	3.90	3.39	1.14
Electrical													
Total	1,311	3,934	3,418	536	512	461	410	451	405	411	1,469	517	12,835
Women	3	11	17	9	7	9	11	7	11	14	17	7	123
% Women	0.23	0.28	0.50	1.68	1.36	1.95	2.68	1.55	2.72	3.41	3.62	1.35	0.96
Industrial													
Total	70	452	594	92	67	73	51	83	77	130	79	86	1,851
Women	0	4	6	2	2	5	2	6	7	6	6	6	52
% Women		0.88	1.00	2.17	2.98	6.84	3.92	7.23	9.09	4.62	7.59	6.98	2.81
Mechanical													
Total	791	2,282	1,945	325	304	270	281	282	293	282	333	311	7,698
Women	1	2	9	2	3	3	2	4	4	5	12	6	53
% Women	0.13	0.09	0.46	0.62	0.98	1.11	0.71	1.42	1.37	1.77	3.60	1.93	0.69
Metallurgical													
Total	943	1,441	888	118	111	92	98	87	107	99	88	87	4,072
Women	4	7	8	0	2	1	2	0	7	5	3	5	
% Women	0.42	0.49	0.90		1.80	1.08	2.04		6.54	5.05	3.41	5.75	1.08
Mining†													
Total	0	10	56	6	6	2	7	4	4	8	7	22	132
Women	0	0	0	0	0	0	0	0	0	0	1	1	
% Women											14.29	4.55	1.52

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.
†Not identified as a separate field until 1968.

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1983, National Research Council

TABLE 7-4

DOCTORAL DEGREES BY SEX, 1920-1983

YEAR	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	8,265	35	0.4
FY 1960 thru FY 1969	19,042	77	0.4
FY 1970 thru FY 1972	110,402	52	0.5
FY 1973	3,338	45	1.3
FY 1974	3,144	34	1.1
FY 1975	2,959	50	1.7
FY 1976	2,791	53	1.9
FY 1977	2,641	74	2.8
FY 1978	2,423	53	2.2
FY 1979	2,494	63	2.5
FY 1980	2,479	90	3.6
FY 1981	2,528	99	3.9
FY 1982	2,644	124	4.7
FY 1983	2,780	124	4.5
TOTAL	67,930	973	1.4

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Engineering

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and 1980-1983 Summary Report, Doctorate Recipients from United States Universities, National Research Council, 1981-1984

TABLE 7-5

NUMBER OF Ph.D. RECIPIENTS IN ENGINEERING BY TYPE OF CITIZENSHIP, 1960-1983

YEAR	TOTAL	U.S.	FOREIGN			Citizenship not Known
			TOTAL	Immigrants	Non-Immigrants	
1960	794	607	183	54	129	4
1961	940	732	202	48	154	6
1962	1,216	949	259	41	218	8
1963	1,357	1,062	280	65	215	15
1964	1,664	1,313	331	84	247	20
1965	2,074	1,603	430	111	319	41
1966	2,301	1,718	501	116	385	82
1967	2,604	1,957	607	198	409	40
1968	2,848	2,134	680	244	436	34
1969	3,251	2,416	780	320	460	55
1970	3,433	2,542	872	401	471	19
1971	3,500	2,436	1,032	513	519	32
1972	3,476	2,307	1,137	619	518	32
1973	3,339	2,126	1,170	552	618	43
1974	3,121	1,735	1,208	507	701	178
1975	2,961	1,685	1,223	413	810	53
1976	2,791	1,532	1,183	384	799	76
1977	2,641	1,468	1,098	325	773	75
1978	2,423	1,259	1,092	325	767	72
1979	2,494	1,294	1,138	322	816	62
1980	2,479	1,254	1,148	298	850	77
1981	2,528	1,168	1,241	298	943	119
1982	2,644	1,165	1,324	296	1,028	155
1983	2,780	1,154	1,488	319	1,169	138

FIELD: Engineering

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 7-6

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	435,534	1,356	0.3	63,909	219	0.3
1960-61 thru 1969-70	372,020	1,880	0.5	123,075	716	0.6
1970-71	45,209	361	0.8	16,323	185	1.1
1971-72	45,693	492	1.1	16,729	271	1.6
1972-73	46,759	576	1.2	16,510	276	1.7
1973-74	43,237	697	1.6	15,176	347	2.3
1974-75	39,806	845	2.1	15,138	371	2.5
1975-76	38,774	1,317	3.4	16,021	568	3.6
1976-77	40,936	2,022	4.9	15,961	697	4.4
1977-78	47,222	3,479	7.4	16,049	840	5.2
1978-79	53,445	4,880	9.1	15,242	934	6.1
1979-80	58,774	5,948	10.1	15,911	1,122	7.1
1980-81	63,287	7,024	11.1	16,386	1,323	8.1
1981-82	80,005	9,106	11.4	17,939	1,628	9.1
TOTAL	1,410,701	39,983	2.8	380,369	9,497	2.4

FIELD: Engineering Technology

SOURCE: Earned Degrees Conferred Series, 1970-71 thru 1981-82
U.S. Office of Education (NCES)

TABLE 7-7

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	5,148	42	0.8	134	0	0.0
1971-72	5,772	46	0.8	237	1	0.4
1972-73	4,854	52	1.1	122	2	1.6
1973-74	7,456	105	1.4	209	9	4.3
1974-75	7,497	192	2.6	221	4	1.8
1975-76	7,943	165	2.1	328	14	4.3
1976-77	8,347	196	2.3	284	23	8.1
1977-78	8,787	246	2.8	360	25	6.9
1978-79	9,355	327	3.5	268	18	6.7
1979-80	10,491	490	4.7	339	20	5.9
1980-81	11,713	675	5.8	323	39	12.1
1981-82	12,984	875	6.7	413	55	13.3
TOTAL	100,357	3,411	3.4	3,238	210	6.5

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1969 through 1983 Series, Engineering Manpower Commission

TABLE 7-8

ENGINEERING DEGREEES GRANTED TO WOMEN BY DEGREE LEVEL, 1968-69 THROUGH 1982-83

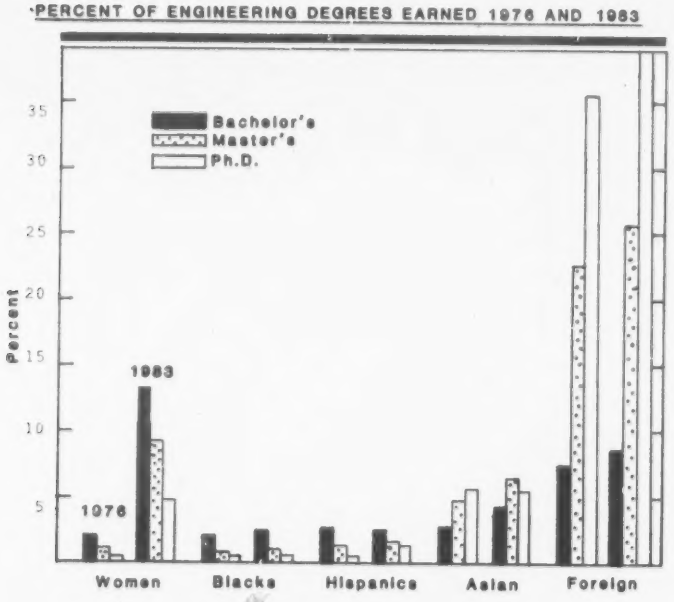
YEAR	BACHELOR'S			MASTER'S+			Ph.D.		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69*	39,972	328	0.82	14,980	107	0.71	3,387	23	0.68
1969-70*	42,966	358	0.83	15,548	170	1.09	3,620	16	0.44
1970-71*	43,167	353	0.82	16,383	158	0.96	3,640	25	0.69
1971-72	44,190	525	1.19	17,356	299	1.76	3,774	35	0.93
1972-73	43,429	624	1.44	17,152	226	1.32	3,587	48	1.34
1973-74	41,407	744	1.80	15,885	393	2.47	3,362	36	1.07
1974-75	38,210	878	2.30	15,773	380	2.41	3,039	53	1.74
1975-76	37,970	1,376	3.62	16,506	557	3.37	2,977	56	1.88
1976-77	40,095	1,961	4.89	16,551	646	3.90	2,814	67	2.38
1977-78	46,095	3,280	7.11	16,182	814	5.03	2,573	51	1.98
1978-79	52,598	4,715	8.97	15,624	866	5.54	2,815	61	2.17
1979-80	58,742	5,680	9.67	17,243	1,092	6.33	2,751	88	3.20
1980-81	62,935	6,545	10.40	17,914	1,225	6.84	2,841	90	3.17
1981-82	66,990	8,140	12.15	18,289	1,539	8.41	2,887	126	4.36
1982-83	72,471	9,566	13.20	19,909	1,796	9.02	3,023	142	4.70

+Includes Engineer Degrees

*Totals for women in these years include only numbers actually reported. The totals would be higher if all institutions had reported all categories. (Figures for later years are complete estimates.)

TABLE 7-9

PERCENT OF ENGINEERING DEGREES EARNED 1976 AND 1983



FIELD: Engineering
SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82, U. S. Office of Education (NCES)

TABLE 7-10

DEGREES AWARDED IN ENGINEERING BY SEX, LEVEL OF DEGREE AND DISCIPLINE, 1947-60 - 1981-82

	AERONAUTICAL		CHEMICAL		CIVIL		ELECTRICAL		INDUSTRIAL		MECHANICAL		METALLURG.		MINING		TOTAL†	
	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.
1947 thru 1960																		
Total	16,628	3,596	39,570	7,808	67,540	9,365	106,170	15,477	13,014	3,024	114,156	10,591	4,082	1,129	1,623	174	435,534	63,909
Women	110	18	285	32	155	29	240	35	39	6	206	25	8	7	2	0	1,336	219
% Women	.66	.50	.72	.41	.23	.31	.23	.23	.30	.20	.18	.24	.20	.62	.12	-	.31	.34
1961 thru 1970																		
Total	18,620	6,842	30,544	8,876	54,099	17,727	110,405	34,771	23,906	10,657	82,008	19,552	5,479	2,510	1,125	543	372,020	123,075
Women*	99	33*	310	59*	263	76*	407	117*	110	53*	241	46*	51	22*	2	7*	1,880	716*
% Women	.53	.48	1.01	.66	.49	.43	.37	.34	.46	.50	.29	.24	.93	.88	.18	1.29	.50	.58
1971 thru 1975																		
Total	8,745	3,001	17,510	5,340	36,959	12,971	58,528	19,360	15,935	8,668	40,734	10,367	2,687	1,380	1,115	318	220,704	79,876
Women	97	31	487	131	478	227	563	244	194	178	295	78	48	26	10	2	2,971	1,450
% Women	1.11	1.03	2.78	2.45	1.29	1.75	.96	1.26	1.22	2.05	.72	.75	1.79	1.88	.90	.63	1.35	1.82
1975-76																		
Total	1,009	479	3,203	1,031	8,059	3,000	9,874	3,774	2,241	1,751	6,841	1,907	351	176	331	70	38,774	16,021
Women	29	10	276	39	252	99	193	104	87	81	147	27	23	10	8	2	1,317	557
% Women	2.87	2.08	8.61	3.78	3.12	3.30	1.95	2.76	3.88	4.63	2.14	1.41	6.55	5.68	2.41	2.85	3.40	3.47
1976-77																		
Total	1,078	385	3,524	1,086	8,228	2,964	9,936	3,788	2,240	1,609	7,703	1,952	350	165	404	77	40,936	15,961
Women	28	8	420	65	429	129	266	134	143	75	235	49	21	5	9	4	2,022	697
% Women	2.59	2.07	11.91	5.98	5.21	4.35	2.67	3.53	6.38	4.66	3.05	2.51	6.00	3.03	2.22	5.19	4.93	4.36
1977-78																		
Total	1,186	411	4,615	1,237	9,265	2,691	11,213	3,742	2,712	1,722	8,924	1,943	420	204	509	92	47,222	16,049
Women	61	11	716	87	690	132	435	142	323	138	466	57	44	14	22	3	3,479	840
% Women	5.14	2.68	15.52	7.03	7.45	4.91	3.88	3.80	11.91	8.01	5.22	2.93	10.48	6.86	4.32	3.26	7.37	5.23
1978-79																		
Total	1,386	372	5,655	1,149	9,941	2,655	12,440	3,596	2,804	1,502	10,171	1,878	503	198	600	92	53,445	15,242
Women	66	17	1,006	114	955	143	659	143	428	128	603	67	81	13	35	3	4,880	934
% Women	4.83	4.57	17.79	9.92	9.67	5.39	5.30	3.98	15.26	8.52	5.93	3.57	16.10	6.57	5.83	3.26	9.13	6.12
1979-80																		
Total	1,424	382	6,383	1,271	10,442	2,683	13,902	3,842	3,217	1,313	11,863	2,060	585	211	682	87	69,265	16,250
Women	82	9	1,215	133	991	197	902	184	545	133	882	98	100	21	51	3	6,438	1,142
% Women	5.76	2.36	19.03	10.46	9.49	7.34	6.49	4.79	16.94	10.13	7.43	4.76	17.09	9.95	7.48	3.45	9.29	7.03
1980-81																		
Total	1,809	408	6,527	1,267	10,678	2,891	14,938	3,901	3,833	1,631	13,329	2,291	603	193	750	84	75,000	16,709
Women	129	20	1,252	163	1,121	207	1,096	201	756	166	1,136	116	116	21	61	1	7,699	1,362
% Women	7.13	4.90	19.18	12.87	10.50	7.16	7.34	5.15	19.72	10.18	8.52	5.06	19.24	10.88	8.13	1.19	10.27	8.15
1981-82																		
Total	2,120	521	6,740	1,285	10,524	2,995	16,455	4,462	3,992	1,656	13,922	2,399	592	262	662	88	92,989	18,352
Women	171	39	1,467	181	1,191	270	1,409	288	943	210	1,220	139	98	27	48	3	9,981	1,683
% Women	8.07	7.49	21.77	14.09	11.32	9.02	8.56	6.45	23.62	12.68	8.76	5.79	16.55	10.31	7.25	3.41	10.73	9.17
TOTAL																		
Total	54,005	16,397	124,271	30,350	225,735	59,942	363,861	96,713	73,894	33,533	309,651	58,015	15,652	6,428	7,801	1,625	1,445,889	381,444
Women	872	196	7,434	1,004	6,525	1,509	6,170	1,592	3,568	1,168	5,431	702	590	166	248	28	42,023	9,611
% Women	1.61	1.20	5.98	3.31	2.89	2.52	1.70	1.65	4.83	3.48	1.75	1.21	3.77	2.58	3.18	1.72	2.91	2.52

* Data not available for 1962-63 thru 1963-64

† Includes Engineering Technology

FIELD: Engineering

SOURCE: Engineering and Technology Degrees 1983, Engineering Manpower Commission

TABLE 7-11

ENGINEERING DEGREES AWARDED BY CURRICULUM, 1982-1983

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN/PACIFIC			AM. INDIAN		
	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.
Aerospace	2,207	512	97	168	25	2	41	3	1	48	7	0	49	17	3	2	0	0
Agricultural	704	146	51	84	5	1	1	0	1	6	1	0	7	5	2	0	0	0
Architectural	568	30	0	89	0	0	24	0	0	18	0	0	12	2	0	0	0	0
Biomedical	577	178	50	139	31	4	10	2	0	12	3	2	22	5	1	1	0	0
Ceramic	294	55	18	65	10	2	5	0	0	2	0	0	7	0	2	0	0	0
Chemical	7,499	1,509	379	1,703	157	23	207	16	6	195	28	8	309	115	31	9	0	0
Computer	2,643	1,420	102	506	216	8	62	25	1	59	18	1	185	106	5	3	2	0
Civil	10,484	3,317	390	1,315	280	18	213	45	3	300	65	4	369	229	23	12	2	0
Electrical	18,590	4,730	628	1,786	250	11	603	76	2	593	69	8	1,176	347	41	27	3	0
Engineering Science	1,298	408	170	207	46	12	21	6	0	22	1	2	33	9	7	2	0	0
Environmental	292	456	68	64	84	2	1	3	0	7	10	0	6	15	0	1	0	0
General	1,923	670	76	322	66	2	59	8	0	51	26	2	173	55	3	2	0	0
Industrial	3,808	1,410	108	996	187	9	159	32	1	155	24	4	112	86	2	5	2	0
Marine	699	163	18	27	4	0	8	1	0	12	0	0	12	5	0	2	0	0
Mechanical	16,484	3,001	399	1,503	186	9	397	31	3	338	36	3	562	206	22	21	7	0
Mining	1,019	280	54	109	36	5	7	0	0	7	3	0	9	2	1	2	0	0
Materials/Metallurgy	1,085	563	228	196	76	24	22	4	1	18	6	1	23	39	18	5	0	0
Nuclear	420	311	114	36	22	5	5	2	0	7	3	4	11	19	6	0	0	0
Petroleum	1,420	227	14	159	13	0	12	2	0	26	3	0	14	7	0	3	0	0
Systems	210	430	56	41	73	5	4	4	0	6	7	2	5	23	6	0	0	0
Other	247	93	3	51	29	0	1	1	0	1	0	0	2	2	0	0	0	0
Total	**72,471**	**19,909**	**3,023**	**9,566**	**1,796**	**142**	**1,862**	**258**	**19**	**1,883**	**310**	**41**	**3,098**	**1,294**	**173**	**97**	**16**	**0**

* Includes Engineer Degrees

SOURCE: Engineering and Technology Degrees, 1969 through 1983 Series, Engineering Manpower Commission

TABLE 7-12

NUMBER AND PERCENT OF ENGINEERING DEGREES GRANTED BY LEVEL OF DEGREE AND MINORITY GROUP, 1968-69 - 1982-83

	TOTAL		BLACK		HISPANICS ++		ASIAN/ PACIFIC		AMERICAN INDIAN		FOREIGN NATIONALS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1968-69*												
Bachelor's	39,972	100.0	314	0.79							1,300	3.25
Master's	14,980	100.0	17	0.11				+			1,784	11.91
Ph.D.	3,387	100.0	2	0.06							410	12.11
1969-70*												
Bachelor's	42,966	100.0	378	0.88								
Master's	15,548	100.0	50	0.32				+				
Ph.D	3,620	100.0	1	0.03								
1970-71*												
Bachelor's	43,167	100.0	407	0.94							1,565	3.62
Master's	16,383	100.0	47	0.29				+			2,952	18.02
Ph.D.	3,640	100.0	8	0.22							741	20.36
1971-72*												
Bachelor's	44,190	100.0	579	1.31							1,944	4.40
Master's**	17,356	100.0	78	0.45				+			2,973	17.13
Ph.D.	3,774	100.0	13	0.34							773	20.48
1972-73												
Bachelor's	43,429	100.0	657	1.51	866	1.99	684	1.58	46	0.11	2,136	4.92
Master's**	17,152	100.0	104	0.61	139	0.81	261	1.52	15	0.09	2,551	14.87
Ph.D.	3,587	100.0	13	0.36	12	0.34	55	1.53	1	0.03	708	19.74
1973-74												
Bachelor's	41,407	100.0	756	1.83	1,037	2.50	957	2.31	32	0.08	2,436	5.88
Master's**	15,885	100.0	158	0.99	192	1.21	425	2.68	4	0.03	3,099	19.51
Ph.D.	3,362	100.0	12	0.36	20	0.60	106	3.15	0	--	1,014	30.16
1974-75												
Bachelor's	33,210	100.0	734	1.92	1,060	2.77	883	2.31	44	0.12	2,466	6.45
Master's**	15,773	100.0	141	0.89	185	1.12	482	3.06	3	0.02	3,250	20.61
Ph.D.	3,039	100.0	17	0.55	28	0.92	141	4.64	2	0.07	891	29.32
1975-76												
Bachelor's	37,970	100.0	777	2.05	1,019	2.68	1,074	2.83	41	0.11	2,799	7.37
Master's**	16,506	100.0	154	0.93	191	1.16	782	4.74	14	0.09	3,691	22.36
Ph.D.	2,977	100.0	10	0.33	15	0.50	168	5.64	0	--	1,060	35.61
1976-77												
Bachelor's	40,095	100.0	844	2.11	1,035	2.58	1,146	2.86	36	0.09	2,996	7.47
Master's**	16,551	100.0	147	0.89	217	1.31	708	4.28	7	0.04	3,825	23.11
Ph.D.	2,814	100.0	16	0.57	22	0.78	158	5.62	1	0.04	995	35.36
1977-78												
Bachelor's	46,091	100.0	894	1.94	1,072	2.33	1,195	2.59	37	0.08	3,084	6.69
Master's**	16,182	100.0	202	1.25	243	1.50	797	4.93	4	0.03	3,720	22.99
Ph.D.	2,573	100.0	15	0.58	25	0.97	175	6.80	3	0.12	874	33.97
1978-79												
Bachelor's	52,598	100.0	1,076	2.05	1,212	2.30	1,532	2.91	59	0.11	3,788	7.20
Master's**	15,624	100.0	157	1.01	213	1.36	675	4.32	9	0.06	3,944	25.24
Ph.D.	2,815	100.0	19	0.68	22	0.78	177	6.29	0	-	929	33.00
1979-80												
Bachelor's	58,742	100.0	1,320	2.25	1,332	2.27	1,922	3.27	60	0.10	4,895	8.33
Master's**	17,243	100.0	167	0.97	247	1.43	827	4.80	4	0.02	4,512	26.17
Ph.D.	2,751	100.0	19	0.69	25	0.91	154	5.60	1	0.04	982	35.70
1980-81												
Bachelor's	62,935	100.0	1,445	2.30	1,513	2.40	2,267	3.60	90	0.14	5,622	8.93
Master's**	17,914	100.0	183	1.02	281	1.57	968	5.40	8	0.04	4,677	26.11
Ph.D.	2,841	100.0	16	0.56	20	0.70	148	5.21	3	0.11	1,054	37.10
1981-82												
Bachelor's	66,990	100.0	1,644	2.45	1,608	2.40	2,577	3.85	91	0.14	5,410	8.08
Master's	18,543	100.0	188	1.01	218	1.18	850	4.58	15	0.80	5,284	28.50
Ph.D.	2,887	100.0	11	0.38	26	0.90	124	4.30	2	0.07	1,167	40.42
1982-83												
Bachelor's	72,471	100.0	1,842	2.54	1,883	2.60	3,098	4.27	97	0.13	6,151	8.49
Master's	19,909	100.0	258	1.30	310	1.56	1,294	6.50	16	0.08	5,145	25.84
Ph.D.	3,023	100.0	19	0.63	41	1.36	173	5.72	0	-	1,192	39.43

* Totals for minority groups in these years include only numbers actually reported. The totals would be higher if all institutions had reported all categories. ** Includes engineering degrees. + Data were not broken out by any minority group, except blacks, prior to 1972-73.

++ Includes Univ. of Puerto Rico as follows: 1973-1981 Bachelor's: 343, 397, 416, 339, 333, 324, 404, 329, 320
1973-1981 Master's: 13, 6, 2, 7, 6, 9, 15, 7, 1

FIELD: Engineering

SOURCE: Engineering and Technology Degrees 1975-1982, Engineering Manpower Commission

TABLE 7-13

ENGINEERING DEGREES AWARDED BY CURRICULUM, 1975-1982

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN/PACIFIC			AM. INDIAN		
	B.S.	M.S.*	Ph.D	B.S.	M.S.*	Ph.D	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D
Aerospace	9,474	3,400	888	488	88	9	151	26	4	142	27	5	166	76	31	7	3	1
Agricultural	4,618	1,109	319	258	35	4	24	6	2	78	16	5	31	25	8	12	1	1
Architectural	3,083	267	6	301	12	0	207	1	0	100	4	0	79	11	0	2	0	0
Biomedical	2,880	1,467	414	548	101	18	54	9	0	45	16	2	106	57	18	7	0	0
Ceramic	1,646	391	130	260	26	2	15	1	0	12	1	1	24	13	6	2	1	0
Chemical	40,869	9,586	2,503	6,167	689	65	824	59	15	720	135	22	1,339	574	167	51	2	0
Computer	12,569	8,181	1,105	1,701	876	60	271	79	2	176	63	12	1,006	439	60	27	2	1
Civil	74,469	23,401	2,674	5,493	1,079	45	1,070	230	16	1,545	341	31	2,154	1,075	119	89	12	0
Electrical	97,380	29,591	4,535	4,638	958	86	2,964	395	42	2,241	386	37	3,697	1,393	269	108	6	1
Engineering Science	8,735	4,309	1,849	947	334	62	137	30	5	106	20	4	183	129	86	10	2	0
Environmental	1,918	4,082	414	320	391	21	12	17	1	17	60	6	23	111	17	2	2	0
General	15,462	5,230	859	1,419	286	24	302	53	3	352	61	4	758	284	47	8	1	1
Industrial	19,881	11,787	874	2,784	683	41	474	101	5	562	170	10	469	457	26	18	5	1
Marine	5,569	1,442	151	150	35	2	56	19	0	58	17	0	43	39	10	8	0	0
Mechanical	79,902	17,273	2,630	4,651	493	38	1,758	148	12	1,432	190	15	2,054	860	141	84	8	2
Mining	5,875	1,215	214	534	83	10	22	24	1	38	6	1	25	6	7	3	3	0
Materials/Metallurgy	6,293	3,624	1,675	813	246	57	111	17	3	172	37	13	136	144	118	9	2	1
Nuclear	3,739	3,224	858	201	135	16	43	22	3	43	33	6	73	104	40	4	3	3
Petroleum	5,707	1,313	153	390	33	3	46	8	3	142	13	1	90	31	8	5	0	0
Systems	1,746	3,012	349	245	308	19	37	34	4	28	37	1	38	91	13	0	0	0
Other	1,712	479	66	250	98	10	155	58	8	183	68	7	233	191	60	4	2	6
TOTAL	403,631	137,448	22,796	32,588	7,160	592	8,734	1,340	123	8,113	1,756	183	12,596	6,099	1,245	458	65	18

*Includes Engineer Degrees

Field: Engineering

Source: Engineering and Technology Degrees, 1978, 80,81,82, & 83, Engineering Manpower Commission

TABLE 7-14

LEADING SCHOOLS IN NUMBER OF ENGINEERING DEGREES AWARDED TO WOMEN, 1983

SCHOOL	BACHELOR'S			MASTER'S*			PhD			ALL RANKS			RANK IN			
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	'79	'80	'81	'82
Purdue U.	1,446	273	18.9	357	36	10.1	88	3	3.4	1,891	312	16.5	3	1	2	2
Georgia Tech.	1,392	245	17.6	381	49	12.9	51	3	5.9	1,824	297	16.3	7	7	1	3
U. of Illinois	1,450	197	13.6	450	54	12.0	145	5	3.4	2,045	256	12.5	2	9	3	5
Texas A&M	1,394	219	15.7	197	21	10.7	40	0	0	1,631	240	14.7	5	3	4	1
Penn State	1,659	211	12.7	210	10	4.8	41	1	2.4	1,910	222	11.6	9	8	5	7
U. of Michigan	1,081	166	15.4	497	45	9.1	63	0	0	1,641	211	12.9	6	4	9	8
U. of Minnesota	836	189	22.6	132	9	6.8	37	0	0	1,005	198	19.7	13	32	37	29
Stanford	293	75	25.6	792	113	14.3	127	7	5.5	1,212	195	16.1	4	6	8	12
VA Poly Inst.	1,019	154	15.1	239	26	10.9	50	0	0	1,308	180	13.8	*	14	17	9
Cornell U.	628	113	18.0	344	52	15.1	79	13	16.5	1,051	178	16.9	10	11	11	13
U. of CA-Berkeley	682	106	15.5	465	59	12.7	170	7	4.1	1,317	172	13.1	8	15	12	4
Mass. Inst. of Tech.	742	138	18.6	669	77	11.5	171	14	8.2	1,582	159	10.1	1	2	6	6
Rensselaer	613	122	19.9	329	31	9.4	63	3	4.8	1,008	156	15.5	*	*	§	23
Michigan State U.	715	146	20.4	87	7	8.0	30	1	3.3	832	154	18.5	11	5	7	11
Ohio State	1,002	118	11.8	293	29	9.9	64	3	4.7	1,359	150	11.0	24	29	18	10
U. of Texas	930	125	13.4	271	18	6.6	55	3	5.5	1,256	146	11.6	20	18	22	†
U. of Wisconsin	863	111	12.9	258	23	8.9	58	5	8.6	1,179	139	11.8	29	31	19	14
Pittsburgh	501	113	22.6	212	20	9.4	25	0	0	739	133	18.0	12	10	24	24
U. of Missouri-Rolla	919	110	12.0	193	13	6.7	13	1	7.7	1,125	124	11.0	23	28	13	16
Michigan Tech	893	115	12.9	64	2	3.1	4	0	0	961	117	12.2	26	33	21	22
U. of Maryland	732	101	13.8	83	15	18.1	14	0	0	829	116	14.0	*	§	39	†
U. of Virginia	354	88	24.9	150	27	18.0	28	1	3.6	532	116	21.8	*	12	20	28
NC State	856	102	11.9	135	9	6.7	40	2	5.0	1,031	113	11.0	*	34	27	17
U. of Washington	649	90	13.9	166	20	12.0	27	3	11.1	842	113	13.4	16	13	16	15
Rutgers	580	91	15.7	107	15	14.0	18	1	5.6	705	107	15.2	*	§	+	†
Columbia U.	269	63	23.4	271	39	14.4	35	2	5.7	575	104	18.1	*	§	+	25
U. of Florida	649	71	10.9	261	27	10.3	32	0	0	942	98	10.4	30	36	27	33
U. of Tennessee	546	81	14.8	115	12	10.4	24	0	0	685	93	13.6	*	§	+	†
Auburn U.	652	88	13.5	35	4	11.4	3	0	0	690	92	13.3	*	§	15	18
U. of Arizona	520	86	16.5	141	6	4.3	22	0	0	683	92	13.5	*	§	+	†
Northwestern	287	68	23.7	162	18	11.1	64	3	4.7	513	89	17.3	15	39	30	26
Colorado Mines	456	69	15.1	113	16	14.2	26	2	7.7	595	87	14.6	*	20	29	31
U. of Massachusetts	512	74	14.5	101	12	11.9	13	0	0	626	86	13.7	*	§	+	37
Lehigh	518	75	14.5	114	10	8.8	18	0	0	650	85	13.1	*	14	22	†
Carnegie Mellon	300	74	24.7	129	9	7.0	37	1	2.7	466	84	18.0	*	16	23	35
Gen. Motors Inst.	318	84	26.4	0	0	0	0	0	0	318	84	26.4	*	37	34	27
Iowa State	754	78	10.3	102	4	3.9	41	1	2.4	897	83	9.3	*	25	25	34
Boston U.	228	67	29.4	86	15	17.4	0	0	0	314	82	26.1	*	§	+	†
Poly Inst. of NY	454	31	6.8	412	49	11.9	26	2	7.7	892	82	9.2	*	§	+	†
Northeastern	675	60	8.9	250	21	8.4	0	0	0	925	81	8.8	*	§	+	20
U. of CO-Boulder	454	64	14.1	106	12	11.3	14	1	7.1	574	77	13.4	21	17	10	19
U. of CA-Davis	408	68	16.7	128	6	4.7	44	0	0	580	74	12.8	*	21	32	21
Clarkson	585	70	12.0	52	4	7.7	6	0	0	643	74	11.5	*	26	38	30
U. of CA-LA	351	51	14.5	202	18	8.9	50	4	8.0	603	73	12.1	*	§	28	36
Worcester Poly	436	62	14.2	69	9	13.0	4	0	0	536	71	13.2	*	§	+	†
U. of MO-Columbia	535	60	11.2	108	7	6.5	23	3	13.0	666	70	10.5	*	§	+	†
TOTAL	72,471	9,566	13.2	19,909	1,796	9.0	3,023	142	4.7	95,403	11,504	12.1				

*Includes Engineer Degrees *Below 30th §Below 43rd +Below 40th †Below 37th

Source: Engineering and Technology Degrees, 1977, 1980-83, Engineering Manpower Commission

TABLE 7-15

LEADING ENGINEERING SCHOOLS IN BACHELOR'S DEGREE AWARDS TO MINORITIES, 1983

SCHOOL	Total Degrees	Black	Hispanic+	Asian	Indian	Total Minority	% Minority	RANK IN 1977	1980	1981	1982
U. Calif.-Berkeley	682	5	15	194	0	214	31.4	1	1	2	1
Poly. Inst. of NY	454	33	30	110	0	173	38.1	3	4	22	16
CCNY	299	72	34	45	0	151	50.5	2	2	1	2
San Jose State	261	16	18	115	0	149	57.1	14	27	16	*
CA State Poly.-Pomona	388	9	24	89	2	124	32.0	§	*	†	6
U. of CA-L.A.	351	5	17	97	0	119	33.9	18	20	11	13
Mass. Inst. of Tech.	742	45	19	53	1	118	15.9	10	9	19	11
CA State-Long Beach	401	10	21	85	1	117	29.2	§	*	†	23
U. of Hawaii	155	0	0	108	0	108	69.7	4	3	3	3
U. of CA-Davis	408	1	18	84	1	104	25.5	§	11	14	18
U. Miami-FL	292	10	74	17	0	101	34.6	§	25	28	26
U. of Washington	649	7	65	86	2	101	15.6	§	22	5	9
U. of Texas	930	9	61	26	0	96	10.3	8	5	8	7
Georgia Tech.	1,392	51	18	24	0	93	6.7	§	15	6	4
U. of Illinois	1,450	10	10	639	3	92	6.3	8	7	10	12
U. of Minnesota	836	13	8	60	2	83	9.9	§	*	†	*
Cornell U.	628	18	15	46	0	79	12.6	§	*	31	17
Columbia U.	269	4	16	58	0	78	29.0	§	*	†	*
U. of Tennessee	546	26	7	42	0	75	13.7	8	5	8	8
Purdue U.	1,446	44	10	18	0	72	5.0	§	*	†	19
U. of New Mexico	300	3	54	12	4	70	23.3	§	*	†	38
Texas A&M	1,394	11	46	13	0	70	5.0	§	*	†	31
CA Poly ST SLO	571	1	17	48	3	69	12.1	§	*	†	*
U. of Michigan	1,081	20	10	34	4	68	6.3	§	*	†	*
U. Texas-El Paso	171	0	65	3	0	68	39.8	15	16	13	15
San Diego State	318	3	32	26	5	66	20.8	§	*	†	*
Rutgers U.	580	12	13	41	0	66	11.4	§	*	†	*
U. of Florida	649	14	35	15	1	65	10.0	13	19	24	25
Howard U.	108	64	0	0	0	64	59.3	§	26	12	22
Drexel Inst.	522	26	4	32	1	62	11.9	§	*	25	*
NJ Tech.	485	18	18	25	0	61	12.6	6	8	18	20
Northeastern	675	27	6	26	1	60	8.9	§	*	†	*
Geo. Washington U.	162	4	4	51	0	59	36.4	§	*	†	37
U. of Arizona	520	0	20	35	3	58	11.2	§	*	†	*
Ill. Inst. Tech.	359	21	6	31	0	58	16.2	§	13	20	10
U. CA-Irvine	183	3	8	46	0	57	31.1	§	*	†	28
U. Southern CA	405	23	34	0	0	57	14.1	7	12	14	*
NC A&T	97	56	0	0	0	56	57.7	§	14	21	14
NC State	856	34	9	10	2	55	6.4	§	*	†	*
U. MO-Rolla	919	24	5	24	0	53	5.8	§	*	†	*
New Mexico State	236	0	47	1	2	50	21.2	§	*	†	36
Princeton U.	221	20	8	21	0	49	22.2	§	*	†	*
Pratt Inst.	155	32	7	10	0	49	31.6	§	21	30	21
Northwestern	287	21	4	23	0	48	16.7	§	*	†	34
U. of Wisconsin	863	15	9	24	0	48	5.6	§	*	†	*
Arizona State	359	16	16	16	0	48	13.4	§	*	†	*
U. Texas-Ari.	358	6	6	35	0	47	13.1	§	*	†	*
Gen. Motors Inst.	318	19	5	22	0	46	14.5	§	*	†	35
U. of Maryland	732	20	4	21	1	45	6.1	§	*	†	*
Texas A&I	106	0	39	4	0	43	40.6	§	*	†	*
Ohio State	1,002	13	7	22	0	42	4.2	§	*	†	*
Southern A&M U.	167	41	0	0	0	41	24.6	§	10	15	27
Penn State	1,659	8	8	23	0	39	2.4	§	*	†	*
TOTAL	**72,471**	**1,862**	**1,883**	**3,098**	**97**	**6,940**	**9.7**				

+Excludes U. of Puerto Rico §Below 20th *Below 27th †Below 31st *Below 39th

FIELD: Engineering

SOURCE: Digest of Education Statistics 1977-1983 and Fall Enrollment in Colleges and Universities, 1980 (NCES) and personal communication NCES 1984 and Engineering Enrollments Series, 1970-83, Engineering Manpower Commission

TABLE 7-16

ENGINEERING ENROLLMENTS RELATED TO HIGH SCHOOL GRADUATES, ENTERING FRESHMEN AND TOTAL ENROLLMENTS, BY SEX, 1970 - 1982

YEAR	HIGH SCHOOL GRADUATES		FIRST TIME ENROLLMENT				TOTAL ENROLLMENT				First Time Enrollment as % of H.S. Graduates		Engineering as % of First Time Enrollment		Engineering as % of Total Enrollment	
			All Fields		Engineering		All Fields		Engineering							
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1970 Number	1,433,000	1,463,000	983,794	796,325	70,204	1,457	5,043,642	3,497,245	314,313	4,682						
% of Total	49.5	50.5	55.3	44.7	98.0	2.0	58.8	41.2	98.5	1.5		61.3		4.0		3.7
% of Same Sex											68.7	54.2	6.8	0.2	6.3	0.1
1971 Number	1,506,000	1,530,000	967,859	797,766	57,025	1,541	5,207,004	3,741,640	287,551	5,303						
% of Total	49.6	50.4	54.8	45.2	97.4	2.6	58.2	41.8	98.2	1.8		58.2		3.3		3.3
% of Same Sex											64.3	52.1	5.5	0.2	5.6	0.1
1972 Number	1,490,000	1,516,000	928,804	811,634	50,558	1,542	5,238,757	3,976,103	264,143	6,010						
% of Total	49.6	50.4	53.4	46.6	97.0	3.0	56.9	43.1	97.8	2.2		55.6		3.0		2.9
% of Same Sex											62.3	53.5	5.0	0.2	5.2	0.2
1973 Number	1,602,000	1,609,000	930,783	826,070	49,508	2,417	5,371,052	4,231,071	255,259	7,744						
% of Total	49.9	50.1	53.0	47.0	95.3	4.7	55.9	44.1	97.1	2.9		54.7		3.0		2.7
% of Same Sex											58.1	51.3	4.7	0.3	4.7	0.2
1974 Number	1,513,000	1,564,000	972,707	881,735	59,178	4,266	5,622,429	4,601,300	265,590	12,397						
% of Total	49.2	50.8	52.5	47.5	93.3	6.7	55.0	45.0	95.5	4.5		60.2		3.4		2.7
% of Same Sex											64.3	56.4	5.2	0.5	4.9	0.3
1975 Number	1,541,000	1,599,000	991,914	918,211	68,613	6,730	6,148,997	5,035,862	292,955	19,923						
% of Total	49.1	50.9	51.9	48.1	91.1	8.9	55.0	45.0	93.6	6.4		60.8		3.9		2.8
% of Same Sex											64.4	57.4	5.6	0.7	5.1	0.4
1976 Number	1,554,000	1,601,000	996,000	926,000	73,705	8,545	5,810,828	5,210,309	315,030	25,970						
% of Total	49.3	50.7	51.8	48.2	89.6	9.4	52.8	47.2	92.4	7.6		61.0		4.3		3.1
% of Same Sex											63.5	58.7	5.6	0.9	5.9	0.5
1977 Number	1,548,000	1,606,000	1,172,147	1,259,453	78,859	9,921	5,789,076	5,496,771	340,265	33,917						
% of Total	49.1	50.9	48.2	51.8	88.8	10.2	51.3	48.7	90.9	9.1		77.1		3.6		3.3
% of Same Sex											75.2	78.4	6.7	0.8	5.9	0.6
1978 Number	1,535,000	1,599,000	1,141,777	1,247,850	84,016	11,789	5,640,998	5,619,094	356,438	40,156						
% of Total	49.0	51.0	51.0	49.0	87.7	12.3	50.2	49.8	89.9	10.1		76.2		4.0		3.5
% of Same Sex											74.4	78.0	7.4	0.9	6.3	0.7
1979 Number	1,531,800	1,602,400	1,194,534	1,343,585	89,693	14,031	5,682,877	5,887,022	383,876	49,575						
% of Total	48.9	51.1	47.1	52.9	86.5	13.5	49.1	50.9	88.6	11.4		79.9		4.1		3.7
% of Same Sex											77.0	82.6	7.6	1.1	6.7	0.8
1980 Number	1,355,198	1,401,425	1,233,446	1,391,629	94,145	16,004	5,874,374	6,222,521	411,709	58,220						
% of Total	49.2	50.8	47.0	53.0	85.5	14.5	48.6	51.4	87.6	12.4		95.2		4.2		3.8
% of Same Sex											91.0	99.3	7.6	1.2	7.0	0.9
1981 Number	1,339,922	1,384,642	1,217,680	1,377,741	97,042	18,238	5,975,056	6,396,616	431,202	66,790						
% of Total	49.2	50.8	46.9	53.1	84.2	15.8	48.3	51.7	86.6	13.4		95.3		4.4		4.0
% of Same Sex											90.9	99.5	8.0	1.3	7.2	1.0
1982 Number	1,474,000	1,527,000	1,199,237	1,306,229	96,148	19,155	5,981,272	6,376,728	441,916	75,413						
% of Total	49.1	50.9	47.9	52.1	83.4	16.6	48.4	51.6	85.4	14.6		83.5		4.6		4.2
% of Same Sex											81.4	85.5	8.0	1.5	7.4	1.2

FIELD: Engineering

SOURCE: Supply and Demand for Scientists and Engineers, 1982 and projections by the Scientific Manpower Commission, 1984

TABLE 7-17

BACHELOR'S DEGREES IN ENGINEERING AS A RATIO OF FRESHMAN ENROLLMENT FOUR YEARS EARLIER

Freshman Class Yr. Fall	Bachelor's Degree Year	MEN			WOMEN		
		Freshmen	B.S. Degrees	Ratio	Freshmen	B.S. Degrees	Ratio
1969	1973	72,932	42,805	58.7	1,181	624	52.8
1970	1974	70,204	40,663	57.9	1,457	744	51.1
1971	1975	57,025	37,332	65.5	1,541	878	57.0
1972	1976	50,558	36,594	72.4	1,542	1,376	89.2
1973	1977	49,512	38,134	77.0	2,417	1,961	81.1
1974	1978	59,178	42,815	72.4	4,266	3,280	76.9
1975	1979	68,613	47,873	69.8	6,730	4,716	70.1
1976	1980	73,705	53,062	72.0	8,545	5,680	66.5
1977	1981	78,859	56,390	71.5	9,921	6,557	66.1
1978	1982	87,016	58,850	67.6	11,789	8,140	69.0
1979	1983	89,693	62,705	69.9	14,031	9,535	67.9
1980	1984	94,145	64,663 [1]	68.7 [1]	16,004	10,754 [2]	67.2 [2]
1981	1985	97,042	67,347 [3]	69.4 [4]	18,238	12,329 [3]	67.6 [4]
1982	1986	96,148	66,727 [3]	69.4 [4]	19,155 [3]	12,949 [3]	67.6 [4]

[1] Estimated at 84.0% of Jr. year enrollments 2 years earlier.

[2] Estimated at 79.3% of the Jr. year enrollments 2 years earlier.

[3] Estimated ratio times freshmen enrollment.

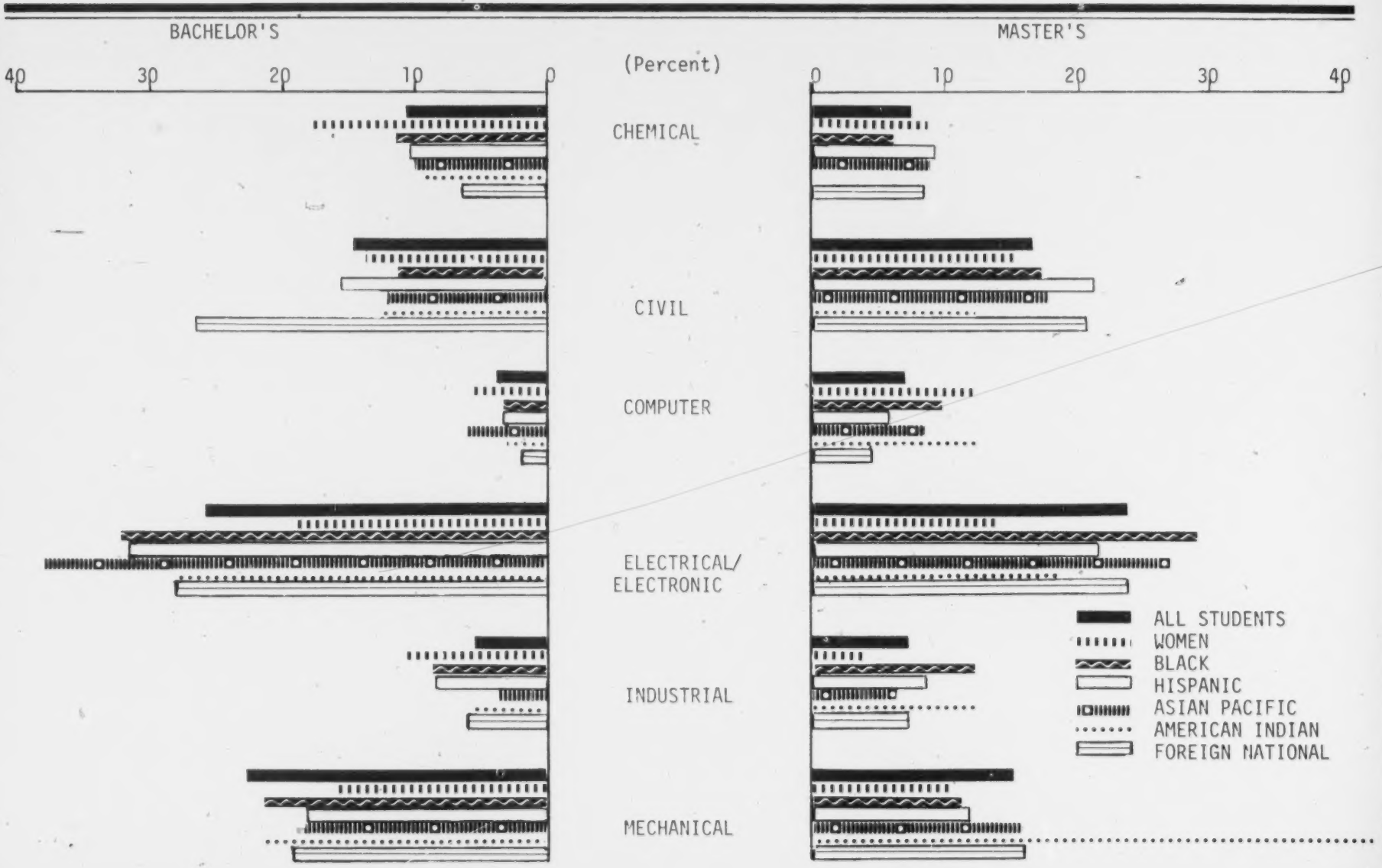
[4] Average of most recent 4 years.

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1983, Engineering Manpower Commission

TABLE 7-18

DISTRIBUTION OF ENGINEERING DEGREES BY SELECTED CURRICULUMS, 1983



FIELD: Engineering

SOURCE: Engineering and Technology Enrollments Series, Fall 1969-1983, Engineering Manpower Commission

TABLE 7-19

NUMBER AND PERCENT OF WOMEN AND MINORITIES ENROLLED IN ENGINEERING, BY DEGREE LEVEL, FALL 1970-1983

									UNDERGRADUATE STUDENTS				GRADUATE STUDENTS			
									Total				Total			
	First Year		Second Year		Third Year		4/5th Year		Full Time		Part Time		Full Time		Part Time	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ALL STUDENTS/FALL																
1970	71,661	100.0	53,419	100.0	49,855	100.0	56,795	100.0	231,730	100.0	18,445	100.0	30,018	100.0	30,802	100.0
1971	58,566	100.0	47,948	100.0	48,543	100.0	55,768	100.0	210,825	100.0	18,222	100.0	36,505	100.0	27,302	100.0
1972	52,100	100.0	42,272	100.0	45,874	100.0	54,481	100.0	194,727	100.0	14,149	100.0	36,337	100.0	24,940	100.0
1973	51,929	100.0	40,519	100.0	41,673	100.0	52,588	100.0	186,705	100.0	15,692	100.0	34,492	100.0	26,114	100.0
1974	63,444	100.0	45,939	100.0	43,007	100.0	48,715	100.0	201,099	100.0	16,689	100.0	32,627	100.0	27,572	100.0
1975	75,343	100.0	55,891	100.0	49,338	100.0	50,807	100.0	231,379	100.0	17,041	100.0	37,285	100.0	21,173	100.0
1976	82,250	100.0	63,003	100.0	56,835	100.0	55,747	100.0	257,835	100.0	19,844	100.0	36,479	100.0	26,842	100.0
1977	88,780	100.0	70,326	100.0	64,721	100.0	65,421	100.0	289,248	100.0	20,634	100.0	39,235	100.0	25,055	100.0
1978	98,805	100.0	72,150	100.0	69,816	100.0	73,466	100.0	311,237	100.0	22,843	100.0	38,381	100.0	24,133	100.0
1979	103,724	100.0	78,594	100.0	74,928	100.0	83,242	100.0	340,488	100.0	25,811	100.0	41,384	100.0	25,768	100.0
1980	110,149	100.0	84,982	100.0	80,024	100.0	89,962	100.0	365,117	100.0	32,227	100.0	44,335	100.0	23,250	100.0
1981	115,280	100.0	87,519	100.0	86,633	100.0	98,145	100.0	387,577	100.0	32,825	100.0	47,772	100.0	29,818	100.0
1982	115,303	100.0	89,785	100.0	90,541	100.0	107,761	100.0	403,390	100.0	31,940	100.0	50,410	100.0	31,589	100.0
1983	109,638	100.0	89,515	100.0	91,233	100.0	115,758	100.00	406,144	100.0	35,061	100.0	57,366	100.0	33,674	100.0
WOMEN																
1970	1,547	2.0	817	1.5	548	1.2	522	0.9	3,569	1.5	158	0.9	555	1.5	400	1.3
1971	1,541	2.6	964	2.0	725	1.5	583	1.0	3,983	1.9	220	1.2	712	2.0	388	1.4
1972	1,542	3.0	1,119	2.6	970	2.1	802	1.5	4,487	2.3	206	1.5	830	2.3	487	2.0
1973	2,417	4.7	1,487	3.7	1,140	2.7	1,020	1.9	6,064	3.2	264	1.7	869	2.6	547	2.2
1974	4,266	6.7	2,467	5.4	1,724	4.0	1,362	2.8	9,828	4.9	430	2.6	1,308	4.0	831	3.0
1975	6,730	8.9	4,197	7.5	2,862	5.8	2,063	4.1	15,852	6.9	1,628	9.6	1,585	4.3	858	3.2
1976	8,545	10.4	5,848	9.3	4,407	7.8	3,136	5.6	21,936	8.5	1,258	6.3	1,693	4.6	1,083	4.0
1977	9,921	11.2	7,537	10.7	6,193	9.6	5,122	7.8	28,773	9.9	1,192	5.8	2,661	6.8	1,291	5.2
1978	11,789	12.3	8,447	11.7	7,453	10.7	6,829	9.3	34,518	11.1	1,414	6.2	2,930	7.6	1,294	5.4
1979	14,031	13.5	10,400	13.2	8,853	11.8	8,743	10.5	42,027	12.3	2,404	9.3	3,409	8.2	1,735	6.7
1980	16,004	14.5	12,094	14.2	10,269	12.8	10,577	11.8	48,944	13.4	2,918	9.1	4,014	9.1	2,344	10.1
1981	18,238	15.8	13,285	15.2	12,023	13.9	12,503	12.7	56,049	14.5	3,220	9.8	4,627	9.7	2,894	9.7
1982	19,155	16.6	14,704	16.4	13,561	15.0	14,908	13.8	62,328	15.5	4,250	13.3	5,585	11.1	3,250	10.3
1983	18,689	17.0	15,143	16.9	14,019	15.4	16,798	14.5	64,649	15.9	4,182	11.9	6,506	11.3	4,104	12.2
BLACK																
1970	1,424	2.0	811	1.5	664	1.3	599	1.1	3,753	1.6	354	1.9	171	0.5	119	0.4
1971	1,289	2.2	926	1.9	693	1.4	614	1.1	4,136	2.0	349	1.9	192	0.5	154	0.6
1972	1,477	2.8	965	2.3	838	1.8	695	1.3	4,356	2.2	491	3.5	238	0.6	181	0.7
1973	2,130	4.1	1,324	3.3	1,056	2.5	998	1.9	5,508	3.0	503	3.2	339	1.0	229	0.9
1974	2,848	4.5	1,632	3.6	1,221	2.8	1,126	2.3	6,827	3.4	549	3.3	356	1.1	407	1.5
1975	3,840	5.1	1,980	3.5	1,366	2.8	1,203	2.4	8,389	3.6	658	3.9	390	1.0	361	1.3
1976	4,372	5.3	2,483	3.9	1,633	2.9	1,340	2.4	9,828	3.8	632	3.2	427	1.2	332	1.2
1977	4,728	5.3	2,928	4.2	2,104	3.3	1,628	2.5	11,388	3.9	613	3.0	438	1.1	487	1.9
1978	5,493	5.7	3,103	4.3	2,330	3.3	2,028	2.8	12,954	4.2	726	3.2	450	1.2	393	1.6
1979	6,339	6.1	3,451	4.4	2,687	3.6	2,309	2.8	14,786	4.3	1,056	4.1	480	1.2	348	1.4
1980	6,661	6.0	3,963	4.7	2,903	3.6	2,654	3.0	16,181	4.4	1,425	4.4	588	1.3	399	1.7
1981	7,015	6.1	4,398	5.0	3,290	3.8	2,908	3.0	17,611	4.5	1,300	4.0	553	1.2	506	1.7
1982	6,715	5.8	4,436	4.9	3,261	3.6	3,186	3.0	17,598	4.4	1,794	5.6	634	1.3	503	1.6
1983	6,342	5.8	4,314	4.8	3,487	3.8	3,674	3.2	17,817	4.4	1,881	5.4	803	1.4	673	2.0

TABLE 7-19 (continued)

NUMBER AND PERCENT OF WOMEN AND MINORITIES ENROLLED IN ENGINEERING, BY DEGREE LEVEL, FALL 1970-1983

	First Year		Second Year		Third Year		4/5th Year		UNDERGRADUATE STUDENTS Total Full Time		UNDERGRADUATE STUDENTS Total Part Time		GRADUATE STUDENTS Total Full Time		GRADUATE STUDENTS Total Part Time	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
HISPANIC*																
1973	1,508	2.9	1,260	3.1	1,151	2.8	2,035	3.9	5,954	3.2	367	2.3	282	0.8	223	0.9
1974	1,930	3.0	1,314	2.9	1,276	3.0	2,060	4.2	6,580	3.3	483	2.9	309	0.9	337	1.2
1975	2,169	2.9	1,639	2.9	1,372	2.8	2,127	4.2	7,307	3.2	430	2.5	407	1.1	318	1.2
1976	1,766	2.2	1,255	2.0	1,026	1.8	1,091	2.0	5,138	2.0	419	2.1	401	1.1	261	1.0
1977	2,645	3.0	1,822	2.6	1,702	2.6	2,326	3.6	8,495	2.9	393	1.9	475	1.2	390	1.6
1978	3,296	3.4	2,078	2.9	1,930	2.8	2,527	3.4	9,831	3.2	570	2.5	426	1.1	312	1.3
1979	3,768	3.6	2,354	3.0	2,230	3.0	2,775	3.3	11,127	3.3	941	3.6	472	1.1	381	1.5
1980	4,208	3.8	2,543	3.0	2,282	2.9	2,827	3.1	11,860	3.2	1,045	3.2	476	1.1	403	1.7
1981	4,768	4.1	2,976	3.4	2,598	3.0	3,273	3.3	13,615	3.5	744	2.3	595	1.2	408	1.4
1982	4,421	3.8	3,106	3.5	2,928	3.2	3,580	3.3	14,035	3.5	1,141	3.6	564	1.1	400	1.3
1983	4,760	4.3	3,251	3.6	3,113	3.4	4,058	3.5	15,182	3.7	1,280	3.7	731	1.3	510	1.5
ASIAN/PACIFIC																
1973	884	1.7	741	1.8	931	2.2	1,208	2.3	3,764	2.0	311	2.0	868	2.5	862	3.3
1974	1,130	1.8	842	1.8	966	2.2	1,024	2.1	3,962	2.0	286	1.7	909	2.8	1,048	3.8
1975	1,155	1.5	1,007	1.8	1,037	2.1	1,094	2.2	4,293	1.9	350	2.1	1,318	3.5	854	3.1
1976	1,560	1.9	1,363	2.2	1,310	2.3	1,392	2.5	5,625	2.2	509	2.6	1,422	3.9	836	3.1
1977	1,847	2.1	1,923	2.7	1,796	2.8	1,804	2.8	7,370	2.5	403	2.0	1,560	4.0	952	3.8
1978	2,169	2.3	2,006	2.8	2,200	3.1	2,265	3.1	8,640	2.8	377	1.7	1,533	4.0	973	4.0
1979	3,133	3.0	2,578	3.3	2,800	3.7	2,966	3.6	11,471	3.4	772	3.0	1,603	3.9	1,033	4.0
1980	2,889	2.6	2,791	3.3	2,746	3.4	3,253	3.6	11,679	3.2	1,093	3.4	1,657	3.7	1,453	6.2
1981	4,035	3.5	3,247	3.7	3,381	3.9	3,799	3.9	14,462	3.7	1,353	4.1	2,217	4.6	1,591	5.3
1982	4,098	3.6	3,492	3.9	3,800	4.2	4,299	4.0	15,689	3.9	1,562	4.9	2,531	5.0	1,434	4.5
1983	4,983	4.5	4,452	5.0	5,201	5.7	6,046	5.2	20,682	5.1	2,325	6.6	3,636	6.3	2,333	6.9
AMERICAN INDIAN																
1973	67	0.1	61	0.2	65	0.2	88	0.2	281	0.2	17	0.1	37	0.1	24	0.1
1974	102	0.2	73	0.2	72	0.2	76	0.2	323	0.2	24	0.1	19	0.1	41	0.1
1975	120	0.2	73	0.1	65	0.1	70	0.1	328	0.1	27	0.2	27	0.1	22	0.1
1976	171	0.2	93	0.2	93	0.2	89	0.2	446	0.2	32	0.1	25	0.1	26	0.1
1977	244	0.3	156	0.2	118	0.2	100	0.2	618	0.2	42	0.2	39	0.1	35	0.1
1978	225	0.2	161	0.2	121	0.2	118	0.2	625	0.2	59	0.3	34	0.1	31	0.1
1979	317	0.3	146	0.2	152	0.2	144	0.2	759	0.2	60	0.2	57	0.1	17	0.1
1980	365	0.3	187	0.2	174	0.2	177	0.2	903	0.2	117	0.4	45	0.1	63	0.2
1981	412	0.4	189	0.2	176	0.2	193	0.2	970	0.3	113	0.3	42	0.1	53	0.2
1982	371	0.3	266	0.3	205	0.2	236	0.2	1,078	0.3	145	0.5	89	0.2	64	0.2
1983	376	0.3	239	0.3	236	0.3	276	0.2	1,127	0.3	145	0.4	53	0.1	60	0.2
FOREIGN NATIONAL																
1977													11,300	28.8	1,962	7.8
1978													11,532	30.0	2,361	9.8
1979	4,984	4.9	4,771	6.1	5,583	7.5	6,298	7.6	21,636	6.4	1,125	4.4	14,061	34.0	1,555	6.0
1980	5,095	4.6	5,436	6.4	6,496	8.1	7,627	8.5	24,654	6.8	1,474	4.6	16,120	36.4	2,690	11.6
1981	4,974	4.3	5,611	6.4	6,831	7.9	7,951	8.1	25,367	6.5	1,218	3.7	17,985	37.6	2,577	8.6
1982	4,925	4.3	5,148	5.7	6,176	6.8	7,358	6.8	23,607	5.9	1,443	4.5	17,651	35.0	2,670	8.5
1983	5,234	4.8	5,161	5.8	6,194	6.8	8,394	7.3	24,983	6.2	1,454	4.1	20,110	35.0	3,530	10.5

* Includes enrollment at the University of Puerto Rico.

FIELD: Engineering

SOURCE: Engineering and Technology Enrollments, Fall 1982, Part II, Engineering Manpower Commission

TABLE 7-20

NUMBER AND PERCENT OF WOMEN AND MINORITIES ENROLLED FULL TIME BY CURRICULUM AND LEVEL, FALL 1982

Curriculum	Total All Students		Women		Black		Hispanic		Am. Indian		Asian/ Pacific	
	UG	Grad	UG	Grad	UG	Grad	UG	Grad	UG	Grad	UG	Grad
Aerospace	14,092	1,783	1,178	101	393	14	366	22	33	0	412	75
%	100.0	100.0	8.4	5.7	2.8	0.8	2.6	1.2	0.3	0.0	2.9	4.2
Agricultural	3,228	644	354	50	16	2	31	9	15		27	10
%	100.0	100.0	11.0	7.8	0.5	0.3	1.0	1.4	0.5	-	0.8	1.6
Architectural	2,490	182	514	9	365		69		6		37	6
%	100.0	100.0	20.6	6.8	14.7	-	2.8	-	0.3	-	1.5	4.6
Bio-Engineering	3,478	797	1,059	165	123	11	98	10	7		226	31
%	100.0	100.0	30.5	20.7	3.5	1.4	2.8	1.3	0.2		6.5	3.9
Ceramic	1,075	181	272	33	26		11	3			22	3
%	100.0	100.0	25.3	18.2	2.4		1.0	1.7		-	2.1	1.7
Chemical	36,313	5,412	9,299	672	1,544	53	1,329	62	82	2	1,356	271
%	100.0	100.0	25.6	12.4	4.3	1.0	3.7	1.2	0.2	0.0	3.7	5.0
Civil	41,368	7,178	5,692	738	1,441	73	1,653	97	143	46	1,076	283
%	100.0	100.0	13.8	10.3	3.5	1.0	4.0	1.4	0.4	0.6	2.6	3.9
Computer	21,838	3,672	5,365	771	982	60	900	32	50	2	1,326	217
%	100.0	100.0	24.6	21.0	4.5	1.6	4.1	0.9	0.2	0.1	6.1	5.9
Electrical	92,553	9,999	10,003	767	5,188	186	3,859	171	249	19	4,689	656
%	100.0	100.0	10.8	7.7	5.6	1.9	4.2	1.7	0.3	0.2	5.1	6.6
Electronic	1,821	590	183	70	69	15	34	4	4		66	23
%	100.0	100.0	10.1	11.9	3.8	2.5	1.9	0.7	0.2		3.6	3.9
Engr. Science	10,108	1,377	1,694	121	276	10	217	9	13	2	299	30
%	100.0	100.0	16.8	8.8	2.7	0.7	2.2	0.7	0.1	0.2	3.0	2.2
Environmental	664	800	184	182	12	7	11	3	3		8	16
%	100.0	100.0	27.7	22.8	1.8	0.9	1.7	0.4	0.5	-	1.2	2.0
General	57,110	1,154	10,156	139	2,707	17	1,731	15	178	2	3,011	207
%	100.0	100.0	17.8	12.1	4.7	1.5	3.0	1.3	0.3	0.2	5.3	17.9
Industrial	14,292	2,993	4,156	565	729	68	941	33	17	4	329	115
%	100.0	100.0	29.1	18.9	5.1	2.3	6.6	1.1	*	0.2	2.3	3.8
Marine	2,676	434	207	23	48		40	1			39	20
%	100.0	100.0	7.7	5.3	1.8		1.5	0.2		-	1.5	4.6
Materials/Metals	3,821	2,333	844	281	91	19	108	12	9	1	85	70
%	100.0	100.0	22.1	12.0	2.4	0.8	2.8	0.5	0.2	*	2.2	3.0
Mechanical	71,388	6,302	7,088	369	2,964	49	2,083	59	166	7	2,032	359
%	100.0	100.0	9.9	5.9	4.2	0.8	2.9	0.9	0.2	0.1	2.9	5.7
Mining/Mineral	4,884	624	703	76	34	1	62	6	30		42	17
%	100.0	100.0	14.4	12.2	0.7	0.2	1.3	1.0	0.6	-	0.9	2.7
Nuclear	2,172	1,035	261	80	39	11	56	6	2	3	59	39
%	100.0	100.0	12.0	1.8	3.8	0.5	5.4	0.3	0.2	0.1	5.7	1.8
Petroleum	9,280	462	1,167	43	143	7	297	3	33		127	15
%	100.0	100.0	12.6	9.3	1.5	1.5	3.2	0.7	0.4		1.4	3.3
Systems	1,514	1,013	273	113	87	10	23	1	5		44	21
%	100.0	100.0	18.0	11.2	5.8	1.0	1.5	0.1	0.3	-	2.9	2.1
All Other	7,149	1,495	1,676	217	316	21	116	6	6		377	47
%	100.0	100.0	23.4	14.5	4.4	1.4	1.6	0.4	0.1		5.3	3.1
TOTAL	**405,211**	**51,000**	**62,511**	**5,655**	**17,667**	**649**	**14,032**	**564**	**1,051**	**88**	**15,689**	**2,531**
%	**100.0**	**100.0**	**15.4**	**11.1**	**4.4**	**1.3**	**3.5**	**1.1**	**0.3**	**0.2**	**3.9**	**5.0**

* Less than 0.1%

FIELD: Nuclear Engineering

SOURCE: Nuclear Engineering Enrollments and Degrees, 1976, 1982 and 1983, Energy Research & Development Administration, ERDA-77-102, July 1977, U.S. Department of Energy, DOE/ER-0165, May 1983, and DOE/ER-0165/1, May 1984

TABLE 7-21

ENROLLMENTS AND DEGREES IN NUCLEAR ENGINEERING BY SEX, MINORITY GROUP AND EDUCATION LEVEL, 1974-1983

MINORITY GROUP, SEX & YEAR	ENROLLMENTS								DEGREES					
	Undergraduate				Graduate									
	3rd Year		4th Year		Master's		Ph.D		Bachelor's		Master's		Ph.D.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
WOMEN														
1974	16	2.32	21	2.92	24	1.96	7	1.16	13	1.97	5	1.08	1	0.78
1975	31	3.57	27	3.13	32	2.26	14	2.11	14	2.48	11	2.35	2	1.98
1976	39	4.13	34	3.58	31	2.33	10	1.72	14	2.05	7	1.50	-	-
1977	59	5.77	43	4.22	42	3.60	20	3.47	15	1.89	13	2.35	2	1.65
1978	55	6.12	49	4.85	45	4.23	7	1.20	28	3.40	9	1.85	4	3.64
1979	61	7.56	10	1.07	55	5.74	21	3.33	36	4.53	12	2.59	1	0.85
1980	69	9.29	68	8.65	64	7.39	31	5.22	44	6.33	19	5.21	-	-
1981	65	8.98	57	6.80	55	6.28	26	4.51	46	7.17	22	6.98	6	4.58
1982	68	8.50	77	7.66	74	7.82	30	4.95	42	6.42	27	7.96	7	5.56
1983	64	7.53	80	8.54	64	6.73	31	5.50	45	6.68	18	5.54	6	4.84
BLACKS														
1974	3	0.43	6	0.83	21	1.72	5	0.83	3	0.45	8	1.72	-	-
1975	6	0.69	3	0.35	20	1.41	7	1.05	4	0.71	5	1.07	-	-
1976	19	2.01	8	0.84	18	1.35	4	0.69	6	0.88	2	0.43	-	-
1977	8	0.78	12	1.18	14	1.20	1	0.69	1	0.13	6	1.08	1	0.83
1978	4	0.45	6	0.59	9	0.85	4	0.68	7	0.85	5	1.03	1	0.91
1979	9	1.11	10	1.07	15	1.57	5	0.79	5	0.63	-	-	1	0.85
1980	10	1.35	9	1.15	12	1.39	8	1.29	7	1.01	4	1.10	-	-
1981	8	1.10	5	0.60	9	1.03	6	1.04	4	0.62	4	1.27	1	0.76
1982	9	1.13	3	0.30	12	1.27	6	0.99	7	1.07	5	1.47	-	-
1983	8	0.94	10	1.07	7	0.74	7	1.24	3	0.45	1	0.31	-	-
HISPANICS														
1974	4	0.58	3	0.42	3*	0.25	4	0.66	3	0.45	2*	0.43	2	1.56
1975	3	0.35	7	0.81	3*	0.21	3	0.45	3	0.53	6*	1.26	1	0.99
1976	8	0.85	7	0.74	21*	1.58	2	0.34	4	0.59	10*	2.14	-	-
1977	7	0.68	5	0.49	10*	0.86	2	0.35	1	0.13	3*	0.54	1	0.83
1978	12	1.34	8	0.79	11	1.03	2	0.34	4	0.49	4	0.82	-	-
1979	6	0.74	9	0.96	11	1.15	1*	0.16	10	1.26	2	0.43	1	0.85
1980	10	1.35	12	1.53	11	1.27	3	0.48	6	0.86	4	1.10	-	-
1981	14	1.93	14	1.67	10	1.14	10	1.73	9	1.25	8	2.53	-	-
1982	15	1.88	16	1.59	8	0.85	6	0.99	8	1.22	3	0.88	1	0.79
1983	11	1.29	14	1.49	14	1.47	6	1.06	9	1.34	4	1.23	1	0.81
ASIAN AMERICAN														
1974	7	1.01	2	0.28	9	0.74	7	1.16	2	0.30	5	1.08	-	-
1975	2	0.23	4	0.46	17	1.20	5	0.75	1	0.18	7	1.50	2	1.98
1976	4	0.42	5	0.53	25	1.88	5	0.88	4	0.59	2	0.43	3	2.07
1977	7	0.68	4	0.39	15	1.28	14	2.43	3	0.38	7	1.26	2	1.65
1978	5	0.56	10	0.99	21	1.97	13	2.22	3	0.36	4	0.82	2	1.82
1979	7	0.87	12	1.29	26	2.71	17	2.70	7	0.88	13	2.81	6	5.13
1980	9	1.21	8	1.02	21	2.42	17	2.75	6	0.86	11	3.01	3	2.59
1981	8	1.10	12	1.43	18	2.05	14	2.43	8	1.25	5	1.59	3	2.29
1982	14	1.75	12	1.19	22	2.33	14	2.31	12	1.83	9	2.65	6	4.76
1983	13	1.53	13	1.39	25	2.63	18	3.19	11	1.63	7	2.15	3	2.42
AMERICAN INDIAN														
1976	-	-	-	-	1	0.08	-	-	-	-	1	0.21	-	-
1977	-	-	1	0.10	1	0.09	1	0.17	-	-	-	-	-	-
1978	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-	1	0.22	-	-
1980	2	0.27	1	0.13	1	0.12	-	-	-	-	-	-	-	-
1981	1	0.14	1	0.12	1	0.11	1	0.17	-	-	-	-	-	-
1982	-	-	-	-	1	0.11	-	-	-	-	-	-	-	-
1983	-	-	1	0.11	3	0.32	-	-	-	-	-	-	-	-
TOTAL														
1974	691	100.00	719	100.00	1,224	100.00	602	100.00	661	100.00	465	100.00	128	100.00
1975	869	100.00	864	100.00	1,414	100.00	665	100.00	565	100.00	468	100.00	101	100.00
1976	944	100.00	949	100.00	1,329	100.00	583	100.00	683	100.00	468	100.00	145	100.00
1977	1,022	100.00	1,020	100.00	1,168	100.00	577	100.00	795	100.00	554	100.00	121	100.00
1978	898	100.00	1,010	100.00	064	100.00	585	100.00	824	100.00	487	100.00	110	100.00
1979	807	100.00	933	100.00	958	100.00	630	100.00	794	100.00	463	100.00	117	100.00
1980	743	100.00	3786	100.00	866	100.00	619	100.00	695	100.00	365	100.00	116	100.00
1981	724	100.00	838	100.00	876	100.00	577	100.00	642	100.00	315	100.00	131	100.00
1982	800	100.00	1,005	100.00	946	100.00	606	100.00	654	100.00	339	100.00	126	100.00
1983	849	100.00	1,005	100.00	946	100.00	606	100.00	654	100.00	339	100.00	126	100.00

* These figures do not include students of the University of Puerto Rico.

FIELD: Health Physics/Radiation Protection

SOURCE: Health Physics/Radiation Protection Enrollments and Degrees 1982 and 1983, U.S. Department of Energy, ORAU-212, April 1983, and DOE/ER-0193, February 1984

TABLE 7-22

ENROLLMENTS AND DEGREES IN HEALTH PHYSICS/RADIATION PROTECTION BY SEX, MINORITY GROUP AND EDUCATION LEVEL, 1973-1983

Sex Minority Group & Year	ENROLLMENTS (FALL TERM)								DEGREES YEAR ENDING JUNE 30					
	Undergraduate				Graduate									
	Junior		Senior		Master's		Ph.D.		Bachelor's		Master's		Ph.D.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
WOMEN														
1973	24	21.82	8	8.42	24	7.82	23	6.55	5	5.15	9	4.97	3	3.95
1974	5	4.38	14	11.57	41	13.31	21	6.12	7	5.98	9	4.71	4	6.06
1975	42	19.63	27	13.11	49	11.92	22	6.32	15	9.43	12	6.38	5	6.58
1976	34	20.24	23	17.83	70	17.54	116	30.69	12	9.52	18	9.84	11	18.33
1977	70	28.69	45	22.73	68	16.71	36	10.94	22	15.38	19	12.26	4	5.88
1978	17	9.50	35	9.66	62	14.49	22	6.40	26	16.56	18	11.39	5	7.58
1979	31	19.25	41	26.45	71	16.86	54	17.70	44	32.12	29	18.71	9	14.06
1980	89	34.63	47	30.52	94	22.01	60	18.93	41	28.87	28	15.05	9	17.31
1981	62	36.05	56	36.13	125	28.03	51	16.78	28	22.40	40	23.81	9	14.75
1982	62	37.35	48	27.43	128	26.72	67	23.67	40	40.40	42	24.85	5	9.09
1983	56	31.11	72	36.00	128	26.78	37	20.44	39	28.68	51	31.29	6	13.64
BLACKS														
1973	18	16.36	3	3.16	4	1.30	2	0.57			1	0.55	2	2.63
1974			1	0.83	2	0.65					1	0.52	1	1.52
1975	18	8.41	17	8.25	1	0.24					2	1.06	1	1.32
1976	8	4.76	2	1.55	5	1.25	4	1.06	3	2.38	2	1.09		
1977	21	8.61	17	8.59	5	1.23	3	0.91	9	6.29	1	0.65		
1978	13	7.26	13	7.30	3	0.70	4	1.16	13	8.28	4	2.53	2	3.03
1979	10	6.21	9	5.81	7	1.66	5	1.64	9	6.57	2	1.29	1	1.56
1980	21	8.17	9	5.84	9	2.11	2	0.63	7	4.93	1	0.54		
1981	11	6.40	11	7.10	7	1.57	3	0.99	6	4.80	1	0.60		
1982	9	5.42	6	3.43	15	3.13	1	0.35	8	8.08	5	2.96		
1983	15	8.33	10	5.00	6	1.26	1	0.55	4	2.94	4	2.45		
HISPANICS														
1973	6	5.45	1	1.05	5	1.63	2	0.57					1	1.32
1974					8	2.60	2	0.58	1	0.85	4	2.09	1	1.52
1975	5	2.34	4	1.94	5	1.22	2	0.57			1	0.53		
1976			2	1.55	4	1.00	4	1.06			1	0.55	2	3.33
1977	11	4.51	2	1.01	2	0.49	4	1.22	2	1.40	1	0.65	1	1.47
1978	5	2.79	6	3.37	2	0.47	4	1.16	3	1.91	1	0.63		
1979	9	5.59	2	1.29	6	1.43	5	1.64	4	2.92				
1980	12	4.67	7	4.55	7	1.64	3	0.95	2	1.41	3	1.61	1	1.92
1981	8	4.65	8	5.16	8	1.79	2	0.66	3	2.40	1	0.60	2	3.28
1982	9	5.42	5	2.86	6	1.25	2	0.71	2	2.02	2	2.96	1	1.82
1983	8	4.44	8	4.00	8	1.67	3	1.66	2	1.47	1	0.61	1	2.27
ASIAN AMERICANS														
1973			4	4.21	7	2.28	4	1.14	1	1.03	4	2.21	2	2.63
1974					3	0.97	2	0.58			2	1.05		
1975	9	4.21	3	1.46	2	0.49	3	0.86	3	1.89	6	3.19	2	2.63
1976	13	7.74	8	6.20	5	1.25	14	3.70	1	0.79	1	0.55	2	3.33
1977	4	1.64	3	1.52	4	0.98	6	1.82	3	2.10			1	1.47
1978	2	1.18			11	2.57	10	2.91	1	0.64				
1979			3	1.94	5	1.19	11	3.61	1	0.73	4	2.58		
1980	19	7.39	15	9.74	3	0.70	16	5.05			2	1.08	1	1.92
1981	15	8.72	11	7.10	5	1.12	14	4.67	7	5.60	5	2.98	1	1.64
1982	18	10.84	12	6.86	10	2.09	9	3.18	1	1.01	2	1.18	2	3.64
1983	15	8.33	15	7.50	8	1.67	9	4.97	10	7.35	7	4.29	3	6.82
TOTAL														
1973	110	100.00	95	100.00	307	100.00	354	100.00	97	100.00	181	100.00	76	100.00
1974	114	100.00	121	100.00	308	100.00	343	100.00	117	100.00	191	100.00	66	100.00
1975	214	100.00	206	100.0	411	100.00	348	100.00	159	100.00	188	100.00	76	100.00
1976	168	100.00	129	100.00	399	100.00	378	100.00	126	100.00	183	100.00	60	100.00
1977	244	100.00	198	100.00	407	100.00	329	100.00	143	100.00	155	100.00	68	100.00
1978	179	100.00	178	100.00	428	100.00	344	100.00	157	100.00	158	100.00	66	100.00
1979	161	100.00	155	100.00	421	100.00	305	100.00	137	100.00	155	100.00	64	100.00
1980	257	100.00	154	100.00	427	100.00	317	100.00	142	100.00	186	100.00	52	100.00
1981	172	100.00	155	100.00	446	100.00	304	100.00	125	100.00	168	100.00	61	100.00
1982	166	100.00	175	100.00	479	100.00	283	100.00	99	100.00	169	100.00	55	100.00
1983	180	100.0	200	100.00	478	100.00	181	100.00	136	100.00	163	100.00	44	100.00

TABLE 7-23

Engineers by Subfield, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Engineers	1445042 100.00%	1388801 96.11%	1252362 86.66%	29420 2.04%	3023 0.21%	59967 4.15%	1734 0.12%	30304 2.10%	56241 3.89%	44494 3.08%	4527 0.31%	225 0.02%	2674 0.19%	98 0.01%	1564 0.11%
Aerospace	88491 100.00%	85622 96.76%	77557 87.64%	1476 1.67%	221 0.25%	4107 4.64%	74 0.08%	2187 2.47%	2869 3.24%	2394 2.71%	221 0.25%	0 0.00%	173 0.20%	0 0.00%	81 0.09%
Agricultural	4505 100.00%	4115 91.34%	3845 85.35%	62 1.38%	4 0.09%	122 2.71%	0 0.00%	82 1.82%	390 8.66%	353 7.84%	23 0.51%	7 0.16%	7 0.16%	0 0.00%	0 0.00%
Chemical	57502 100.00%	54487 94.76%	49349 85.82%	947 1.65%	70 0.12%	3075 5.35%	70 0.12%	976 1.70%	3015 5.24%	2490 4.33%	205 0.36%	8 0.01%	186 0.32%	16 0.03%	110 0.19%
Civil	204035 100.00%	198029 97.06%	174802 95.67%	4692 2.30%	544 0.27%	12206 5.98%	378 0.19%	5407 2.65%	6006 2.94%	5081 2.49%	368 0.18%	24 0.01%	352 0.17%	22 0.01%	159 0.08%
Electrical/Electronic	322874 100.00%	306695 94.99%	276662 85.69%	7977 2.47%	715 0.22%	13830 4.28%	324 0.10%	7187 2.23%	16179 5.01%	13344 4.13%	1442 0.45%	14 0.00%	681 0.21%	19 0.31%	679 0.21%
Industrial	194322 100.00%	174968 90.04%	163026 83.89%	4494 2.31%	342 0.18%	3432 1.77%	199 0.10%	3475 1.79%	19354 9.96%	17079 8.79%	1116 0.57%	94 0.05%	396 0.20%	30 0.02%	639 0.33%
Marine/Naval Architects	16682 100.00%	16367 98.11%	15011 89.98%	343 2.06%	49 0.29%	393 2.36%	16 0.10%	555 3.33%	315 1.89%	278 1.67%	19 0.11%	6 0.04%	9 0.05%	0 0.00%	3 0.02%
Metallurgical/Materials	24539 100.00%	23260 94.79%	21397 87.20%	463 1.89%	19 0.08%	893 3.64%	49 0.20%	439 1.79%	1279 5.21%	1095 4.46%	80 0.33%	21 0.09%	41 0.17%	0 0.00%	42 0.17%
Mechanical	197650 100.00%	193579 97.94%	177807 89.96%	4354 2.20%	360 0.18%	7457 3.77%	241 0.12%	3360 1.70%	4071 2.06%	3472 1.76%	304 0.15%	20 0.01%	182 0.09%	5 0.00%	88 0.04%
Mining	10041 100.00%	9700 96.60%	9078 90.41%	100 1.00%	61 0.61%	194 1.93%	0 0.00%	267 2.66%	341 3.40%	301 3.00%	0 0.00%	7 0.07%	5 0.05%	0 0.00%	28 0.28%
Nuclear	9240 100.00%	8897 96.29%	7949 86.03%	128 1.39%	22 0.24%	597 6.46%	20 0.22%	181 1.96%	343 3.71%	298 3.23%	10 0.11%	0 0.00%	18 0.19%	0 0.00%	17 0.18%
Petroleum	23054 100.00%	22235 96.45%	20883 90.58%	315 1.37%	98 0.42%	475 2.06%	47 0.20%	419 1.82%	819 3.55%	719 3.12%	31 0.13%	6 0.03%	35 0.15%	0 0.00%	28 0.12%
Sales	44069 100.00%	42646 96.77%	41407 93.96%	335 0.76%	23 0.05%	399 0.91%	12 0.03%	470 1.07%	1423 3.23%	1279 2.90%	52 0.12%	7 0.02%	11 0.02%	0 0.00%	74 0.17%
Engineers, Misc.	248038 100.00%	238210 96.04%	213589 86.11%	5734 2.31%	497 0.20%	12787 5.16%	304 0.12%	5299 2.14%	9828 3.96%	8321 3.35%	656 0.26%	12 0.00%	578 0.23%	6 0.00%	255 0.10%

FIELD: Engineering and Architecture

SOURCE: Federal Civilian Workforce Statistics, Affirmative Employment Statistics, U.S. Office of Personnel Management, CIG-82-71, September 30, 1982

TABLE 7-24

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN ENGINEERING AND ARCHITECTURE BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 30, 1982

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		AM. INDIAN		ASIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% I	No.	% A	No.	% W
General Engineering	16,886	307	1.8	1,470	8.7	53	0.3	402	2.4	379	2.2	95	0.6	594	3.5	15,416	91.3
Safety Engineering	589	17	2.9	60	10.2	4	0.7	11	1.9	31	5.3	5	0.8	13	2.2	529	89.8
Fire Preven. Engineering	129	0	0.0	10	7.8	0	0.0	3	2.3	2	1.6	1	0.8	4	3.1	119	92.2
Materials Engineering	964	61	6.3	76	7.9	12	1.2	28	2.9	10	1.0	3	0.3	35	3.6	888	92.1
Landscape Architecture	635	56	8.8	26	4.1	4	0.6	5	0.8	5	0.8	6	0.9	10	1.6	609	95.9
Architecture	1,592	108	6.8	347	21.8	24	1.5	155	9.7	57	3.6	17	1.1	118	7.4	1,245	78.2
Civil Engineering	15,922	526	3.3	1,738	10.9	93	0.6	297	1.9	524	3.3	120	0.8	797	5.0	14,184	89.1
Environmental Engineering	1,662	94	5.7	197	11.9	11	0.7	33	2.0	43	2.6	8	0.5	113	6.8	1,465	88.1
Mechanical Engineering	10,236	236	2.3	1,125	11.0	33	0.3	232	2.3	189	1.8	27	0.3	677	6.6	9,111	89.0
Nuclear Engineering	2,348	59	2.5	233	9.9	10	0.4	29	1.2	26	1.1	6	0.3	172	7.3	2,115	90.1
Electrical Engineering	3,528	67	1.9	546	15.5	20	0.6	121	3.4	98	2.8	15	0.4	312	8.8	2,982	84.5
Electronics Engineering	20,818	414	2.0	2,009	9.7	72	0.3	614	2.9	485	2.3	57	0.3	853	4.1	18,809	90.3
Biomedical Engineering	243	17	7.0	16	6.6	5	2.1	4	1.6	2	0.8	0	0.0	10	4.1	227	93.4
Aerospace Engineering	8,148	217	2.7	492	6.1	30	0.4	148	1.8	146	1.8	16	0.2	187	2.3	7,651	93.9
Naval Architecture	1,191	37	3.1	163	13.7	10	0.8	45	3.8	16	1.3	2	0.2	100	8.4	1,028	86.3
Mining Engineering	466	6	1.3	28	6.0	0	0.0	0	0.0	4	0.9	5	1.0	19	4.1	438	94.0
Petroleum Engineering	427	16	3.7	31	7.3	3	0.7	7	1.6	13	3.0	3	0.7	8	1.9	396	92.7
Agricultural Engineering	417	1	0.2	16	3.8	0	0.0	1	0.2	5	1.2	4	1.0	6	1.4	401	96.2
Ceramic Engineering	56	6	10.7	3	5.4	0	0.0	0	0.0	1	1.8	0	0.0	2	3.6	53	94.6
Chemical Engineering	1,342	80	6.0	158	11.8	21	1.6	23	1.7	48	3.6	2	0.1	85	6.3	1,184	88.2
Welding Engineering	86	2	2.3	12	14.0	0	0.0	2	2.3	1	1.2	1	1.2	8	9.3	74	86.0
Industrial Engineering	2,432	94	3.9	229	9.4	20	0.8	44	1.8	78	3.2	7	0.2	100	4.1	2,203	90.6
TOTAL	90,117	2,421	2.7	8,990	10.0	425	0.5	2,204	2.4	2,163	2.4	400	0.4	4,223	4.7	81,127	90.0

FIELD: Engineering Technology

SOURCE: Engineering and Technology Degrees Series 1973 thru 1983, Engineering Manpower Commission

TABLE 7-25

WOMEN AND MINORITY ENGINEERING TECHNOLOGY GRADUATES, BY LEVEL

		Engineering Technology				Industrial Technology			
		Associate		Bachelor's		Associate		Bachelor's	
		No.	%	No.	%	No.	%	No.	%
TOTAL	1972-73	18,316	100.0	4,402	100.0	6,481	100.0	2,076	100.0
	1973-74	17,537	100.0	4,830	100.0	7,389	100.0	1,613	100.0
	1974-75	16,978	100.0	5,867	100.0	5,816	100.0	2,042	100.0
	1975-76	16,685	100.0	5,721	100.0	6,362	100.0	1,358	100.0
	1976-77	15,123	100.0	6,337	100.0	5,346	100.0	1,345	100.0
	1977-78	16,099	100.0	7,164	100.0	6,660	100.0	2,202	100.0
	1978-79	14,622	100.0	6,609	100.0	5,306	100.0	2,105	100.0
	1979-80	15,817	100.0	7,567	100.0	5,937	100.0	2,481	100.0
	1980-81	17,975	100.0	8,469	100.0	7,340	100.0	3,188	100.0
	1981-82	17,198	100.0	8,325	100.0	6,514	100.0	3,110	100.0
	1982-83	19,329	100.0	9,222	100.0	*	*	*	*
WOMEN	1972-73	436	2.4	42	1.0	278	4.3	28	1.3
	1973-74	581	3.3	29	0.6	246	3.3	11	0.7
	1974-75	502	3.0	60	1.0	316	5.4	25	1.2
	1975-76	780	4.7	24	0.4	433	6.8	24	1.8
	1976-77	825	5.5	147	2.3	347	6.5	46	3.4
	1977-78	947	5.9	191	2.7	605	9.1	120	5.5
	1978-79	1,060	7.2	246	3.7	516	9.7	120	5.7
	1979-80	1,219	7.7	299	4.0	633	10.7	238	9.6
	1980-81	1,637	9.1	387	4.6	933	12.7	331	10.4
	1981-82	1,656	9.6	333	4.0	710	10.9	259	8.3
	1982-83	1,954	10.1	480	5.2	*	*	*	*
BLACK	1972-73	583	3.2	151	3.4	165	2.5	85	4.1
	1973-74	536	3.0	226	4.7	227	3.1	66	4.1
	1974-75	598	3.5	228	3.9	215	3.7	80	3.9
	1975-76	793	4.8	254	4.4	339	5.3	111	8.2
	1976-77	594	3.9	256	4.0	131	2.5	87	6.5
	1977-78	739	4.6	295	4.1	510	7.7	114	5.2
	1978-79	538	3.7	310	4.7	275	5.2	180	8.6
	1979-80	848	5.4	382	5.0	318	5.3	88	3.5
	1980-81	924	5.1	296	3.5	362	4.9	244	7.7
	1981-82	663	3.9	292	3.5	336	5.2	85	2.7
	1982-83	931	4.8	351	3.8	*	*	*	*
HISPANIC	1972-73	486	2.7	41	0.9	76	1.8	6	0.3
	1973-74	323	1.8	95	2.0	175	2.4	22	1.4
	1974-75	345	2.0	137	2.3	148	2.5	36	1.7
	1975-76	536	3.2	112	2.0	261	4.1	17	1.2
	1976-77	350	2.3	122	1.9	180	3.4	26	1.9
	1977-78	371	2.3	125	1.7	210	3.2	19	0.9
	1978-79	445	3.0	144	2.2	254	4.8	28	1.3
	1979-80	600	3.8	150	2.0	217	3.7	22	0.9
	1980-81	528	2.9	171	2.0	283	3.9	74	2.3
	1981-82	283	1.6	220	2.6	160	2.5	47	1.5
	1982-83	426	2.2	235	2.5	*	*	*	*
ASIAN	1972-73	74	0.4	52	1.2	18	0.3	2	0.1
	1973-74	137	0.8	89	1.8	29	0.3	16	1.0
	1974-75	146	0.9	92	1.6	30	0.5	14	0.7
	1975-76	183	1.1	74	1.3	113	1.8	5	0.4
	1976-77	144	1.0	93	1.5	31	0.6	36	2.7
	1977-78	194	1.2	114	1.6	91	1.4	10	0.5
	1978-79	197	1.3	211	3.2	49	0.9	14	0.7
	1979-80	219	1.4	145	1.9	58	1.0	17	0.7
	1980-81	256	1.4	258	3.0	108	1.5	17	0.5
	1981-82	286	1.7	199	2.4	101	1.6	24	0.8
	1982-83	361	1.9	259	2.8	*	*	*	*
AM. INDIAN	1972-73	76	0.4	3	0.1	9	0.1	6	0.3
	1973-74	47	0.3	10	0.2	91	1.2	1	0.1
	1974-75	71	0.4	8	0.1	79	1.3	2	0.1
	1975-76	28	0.2	11	0.2	19	0.3	3	0.2
	1976-77	25	0.2	9	0.1	6	0.1	6	0.4
	1977-78	85	0.5	12	0.2	23	0.3	2	0.1
	1978-79	28	0.2	11	0.2	39	0.7	11	0.5
	1979-80	20	0.1	8	0.1	11	0.2	10	0.4
	1980-81	37	0.2	14	0.2	78	1.0	3	0.1
	1981-82	46	0.3	18	0.2	30	0.5	33	1.1
	1982-83	58	0.3	10	0.1	*	*	*	*

*Data no longer collected in Industrial Technology.

FIELD: Engineering Technology

SOURCE: Engineering and Technology Degrees, 1977, 1978, 1979, 1980, 1981 1982 and 1983, Engineering Manpower Commission

TABLE 7-26

BACHELOR'S DEGREES AWARDED IN ENGINEERING TECHNOLOGY AND INDUSTRIAL TECHNOLOGY BY CURRICULUM, SEX AND MINORITY GROUP, 1977-1983

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN/PACIFIC			AM. INDIAN		
	1977-1982		1983	1977-1982		1983	1977-1982		1983	1977-1982		1983	1977-1982		1983	1977-1982		1983
	Eng.	Ind.	Eng.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.
Aeronautical	660	453	49	6	34	1	14	17	0	6	2	0	15	3	0	4	1	0
Air Conditioning	186	25	0	2	0	0	7	0	0	5	10	0	3	4	0	1	0	0
Architectural	976	167	131	60	19	17	48	11	4	13	19	2	14	3	0	0	0	0
Automotive	231	731	0	0	6	0	15	21	0	3	46	0	7	1	0	0	0	0
Chemical	95	2	20	17	0	6	3	0	0	1	0	0	0	0	0	0	0	0
Civil	4,052	16	737	167	13	45	137	0	14	113	0	30	200	0	7	7	0	0
Computer	748	235	139	165	47	20	189	15	7	3	6	1	33	8	3	0	0	0
Construction	2,729	875	561	87	22	23	111	62	23	71	10	10	39	1	12	9	1	1
Drafting/Design	637	441	193	57	86	13	50	64	2	12	3	3	11	0	2	4	0	0
Electrical	6,858	217	1,753	122	7	71	234	10	61	91	10	36	119	2	40	4	0	2
Electromechanical	698	22	121	15	1	2	51	0	20	23	0	7	18	1	5	2	0	0
Electronic	9,534	688	2,050	161	16	86	494	169	132	205	9	68	267	2	120	14	1	2
Engineering Sci.	559	11	0	10	0	0	10	1	0	5	0	0	2	0	0	0	0	0
General	3,400	1,035	525	141	0	38	64	34	16	164	29	23	92	10	38	7	30	2
Industrial	3,139	8,422	708	249	676	45	89	472	23	43	75	12	22	77	7	2	28	0
Marine	312	246	55	6	10	1	4	1	2	3	5	3	12	1	2	0	0	0
Materials/Metals	356	40	173	14	0	0	3	0	0	13	5	0	9	1	0	1	0	0
Mechanical	7,570	200	1,803	189	9	73	250	10	46	113	2	30	152	1	22	11	1	1
Mineral/Mining	357	54	0	8	3	15	4	0	1	4	3	5	1	0	1	0	0	1
Nuclear	79	0	0	12	2	0	1	0	0	1	0	0	2	0	0	0	0	0
Other	1,411	490	204	114	68	24	41	35	0	39	14	5	5	0	0	4	0	1
Total	44,453	14,431	9,222	1,603	1,114	480	1,777	798	351	932	245	235	1,020	118	259	72	62	10

FIELD: Engineering Technology

SOURCE: Engineering and Technology Degrees, 1977, 1978, 1979, 1980, 1981 1982 and 1983, Engineering Manpower Commission

TABLE 7-27

ASSOCIATE DEGREES AWARDED IN ENGINEERING TECHNOLOGY AND INDUSTRIAL TECHNOLOGY BY CURRICULUM, SEX AND MINORITY GROUP, 1977-1983

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN/PACIFIC			AM. INDIAN		
	1977-1982		1983	1977-1982		1983	1977-1982		1983	1977-1982		1983	1977-1982		1983	1977-1982		1983
	Eng.	Ind.	Eng.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.
Aeronautical	2,220	1,926	381	63	56	11	163	95	30	136	126	27	74	28	15	3	4	0
Air Conditioning	1,544	1,476	350	27	16	3	86	64	10	51	121	3	10	9	1	31	5	3
Architectural	4,957	1,603	909	705	231	134	205	60	47	77	38	19	31	12	7	10	2	2
Automotive	2,007	3,691	349	20	56	3	56	196	21	25	121	7	7	64	3	5	47	3
Chemical	1,625	231	257	573	96	91	132	24	22	17	4	5	32	5	5	0	1	0
Civil	7,525	817	1,271	543	52	146	231	42	43	163	7	16	78	3	15	16	21	2
Computer	5,885	3,955	1,215	1,554	1,508	402	474	277	27	162	139	23	52	67	34	13	14	3
Construction	2,942	1,723	368	116	59	20	82	126	18	42	94	4	10	11	4	6	17	3
Drafting/Design	3,827	3,616	685	535	604	135	217	212	48	136	272	14	69	67	10	24	6	6
Electrical	12,264	1,976	3,241	345	34	183	394	46	146	152	28	52	55	14	34	17	10	2
Electromechanical	2,329	844	371	87	29	18	134	23	33	101	16	10	74	12	21	14	0	1
Electronic	21,728	7,254	4,323	798	278	258	1,196	382	2	644	151	166	258	107	135	49	22	18
Engineering Sci.	7,434	2,063	212	504	1	25	186	0	290	545	3	0	219	1	0	23	0	0
General	880	292	185	68	17	13	25	19	7	24	2	6	87	6	13	5	0	0
Industrial	3,121	805	859	344	134	116	181	136	32	56	51	6	16	10	3	2	9	3
Marine	10	205	7	0	8	0	0	0	0	0	7	0	12	1	0	0	0	0
Materials/Metals	436	301	0	24	9	0	3	19	0	7	21	0	3	1	0	0	0	0
Mechanical	12,244	1,736	3,018	727	51	259	384	113	100	186	17	45	101	8	32	21	21	8
Mineral/Mining	781	263	271	33	8	18	9	8	4	3	10	3	1	0	0	0	0	2
Nuclear	225	52	37	28	4	4	10	1	1	1	3	0	0	0	0	0	0	0
Other	2,004	2,220	1,020	236	493	115	122	86	50	47	62	20	18	11	27	2	8	2
TOTAL	96,834	37,103	19,329	7,344	3,744	1,954	4,306	1,932	931	2,577	1,304	426	1,296	438	361	241	187	58

FIELD: Engineering Technology

SOURCE: Engineering and Technology Enrollments Series 1972-1982, Engineering Manpower Commission

TABLE 7-28

ENGINEERING TECHNOLOGY ENROLLMENTS OF WOMEN AND MINORITIES*

	ASSOCIATE DEGREE & PRE-ENGINEERING PROGRAMS					BACHELOR OF TECHNOLOGY PROGRAMS						All Post Bacc.
				Total						Total		
	1st Year	2nd Year	Other Years	Full Time	Part Time	1st Year	2nd Year	3rd Year	4th Year	Full Time	Part Time	
ALL STUDENTS												
Fall 1972	69,179	38,686	1,529	109,394	35,857	4,345	4,145	7,276	7,229	22,995	4,683	594
Fall 1973	68,024	37,754	1,555	107,333	40,144	4,869	3,946	6,367	6,334	21,516	4,097	251
Fall 1974	61,372	32,517	10,633	104,522	42,833	4,506	3,398	6,353	5,737	19,994	4,848	198
Fall 1976	55,792	31,771	1,901	89,464	36,460	7,134	5,764	8,467	7,770	29,135	6,543	483
Fall 1977	56,171	31,874	1,056	89,101	82,906	9,506	7,310	10,417	10,169	37,402	9,571	489
Fall 1978	44,934	24,035	733	69,702	34,589	8,420	6,816	9,881	9,911	35,028	8,400	482
Fall 1979	47,517	24,988	816	73,321	41,284	8,680	6,547	9,902	9,842	34,971	9,982	294
Fall 1980	67,971	35,434	1,188	104,593	54,549	10,998	8,543	12,271	12,132	43,944	12,767	556
Fall 1981	55,202	32,461	872	88,535	45,299	10,691	8,313	13,339	13,020	45,363	11,409	546
Fall 1982	51,513	29,438	797	81,748	45,095	7,826	7,369	11,419	11,604	38,118	10,696	376
WOMEN												
Fall 1972	1,536	648	11	2,657	953	75	72	119	70	343	67	0
Fall 1973	2,315	1,143	118	4,240	1,932	138	95	147	75	490	146	11
Fall 1974	2,745	1,207	545	4,768	3,055	189	131	151	142	630	189	14
Fall 1976	3,819	2,117	68	6,004	3,225	426	426	365	245	1,162	301	55
Fall 1977	4,877	2,499	54	7,430	2,411	587	464	549	354	1,954	287	29
Fall 1978	4,333	1,918	38	6,359	2,500	681	564	629	502	2,376	533	40
Fall 1979	5,621	2,428	180	8,229	4,923	800	533	595	447	2,375	508	82
Fall 1980	8,754	3,795	371	12,920	7,594	1,085	837	947	834	3,703	776	60
Fall 1981	7,838	3,970	68	11,876	8,059	1,360	978	1,158	1,067	4,563	766	62
Fall 1982	6,472	3,503	45	10,020	5,389	762	624	848	736	2,970	599	29
BLACKS												
Fall 1972	2,052	1,152	10	3,864	1,058	260	149	238	212	1,135	88	13
Fall 1973	2,569	1,316	41	5,045	1,264	295	216	295	261	1,381	177	12
Fall 1974	2,723	1,132	1,472	5,815	2,406	260	196	249	199	1,048	158	0
Fall 1976	3,917	2,164	159	6,240	3,186	646	536	511	409	2,102	386	52
Fall 1977	4,347	1,794	78	6,219	2,201	968	776	975	615	3,234	320	55
Fall 1978	3,892	1,570	33	5,495	2,170	644	538	675	608	2,465	353	23
Fall 1979	4,101	1,601	48	5,750	2,726	660	473	537	447	2,117	323	8
Fall 1980	5,888	2,191	60	8,139	3,762	1,071	752	896	716	3,435	552	20
Fall 1981	4,519	1,834	67	6,409	3,860	1,209	886	978	905	3,978	538	39
Fall 1982	4,567	1,795	22	6,384	2,922	818	707	670	542	2,737	483	7
HISPANICS												
Fall 1973	1,321	731	28	2,364	792	79	30	53	39	341		
Fall 1974	1,478	670	316	2,572	1,379	65	34	143	116	421	138	0
Fall 1976	2,290	1,418	67	3,775	1,667	238	185	215	173	811	255	8
Fall 1977	2,908	1,404	6	4,318	1,414	262	212	304	236	1,014	105	22
Fall 1978	2,004	866	9	2,879	1,318	182	150	343	289	964	234	6
Fall 1979	1,214	502	29	1,745	857	184	137	243	228	792	267	5
Fall 1980	2,586	1,236	51	3,873	1,291	151	146	280	228	805	332	15
Fall 1981	1,668	797	8	2,473	1,064	213	146	270	268	897	465	5
Fall 1982	2,015	815	34	2,864	1,073	216	170	263	236	885	400	8
AMERICAN IN.												
Fall 1973	213	92	0	490	67	8	7	13	13	71	10	0
Fall 1974	352	279	30	673	143	9	7	25	23	65	14	0
Fall 1976	576	238	11	825	157	49	31	31	22	133	6	0
Fall 1977	408	175	2	585	137	42	24	35	39	140	40	0
Fall 1978	342	141	0	483	138	45	35	36	34	150	2	0
Fall 1979	335	133	5	473	124	32	24	39	36	131	18	0
Fall 1980	412	151	5	568	160	48	27	33	42	150	13	0
Fall 1981	420	174	3	597	152	42	16	23	31	112	39	1
Fall 1982	245	119	3	367	102	32	21	32	37	122	30	0
ASIAN/PACIFIC												
Fall 1973	199	136	2	459	118	22	13	39	41	200	50	0
Fall 1974	303	190	98	645	232	32	23	59	52	170	62	0
Fall 1976	685	335	33	1,053	395	84	64	80	64	292	68	3
Fall 1977	736	373	6	1,115	528	82	48	129	92	351	36	9
Fall 1978	791	364	6	1,161	449	97	71	126	108	402	29	6
Fall 1979	718	349	18	1,085	298	151	104	214	175	644	111	5
Fall 1980	981	543	35	1,559	541	127	94	228	232	681	110	20
Fall 1981	1,015	557	34	1,606	660	192	130	182	285	789	216	6
Fall 1982	1,048	544	31	1,623	500	197	224	286	265	972	236	23

*Totals for women and minority groups include only number actually reported. The totals would be higher if all institutions had reported all categories.

SOURCE: Digest of Education Statistics, 1983-84, National Center for Education Statistics, NCES 83-407, December 1983

TABLE 7-29

ASSOCIATE DEGREES AND OTHER AWARDS BASED ON OCCUPATIONAL CURRICULUMS, BY LENGTH AND TYPE OF CURRICULUM AND BY SEX OF RECIPIENT: UNITED STATES, 1980-81

Curriculum	All awards			Awards based on organized occupational curriculums of—					
				At least 2 years but less than 4 years			At least 1 year but less than 2 years		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
1	2	3	4	5	6	7	8	9	10
Occupational curriculums, total	**374,820**	**171,171**	**203,649**	**287,416**	**133,141**	**154,275**	**87,404**	**38,030**	**49,374**
Science and engineering-related curriculums	214,776	112,270	102,506	155,844	80,810	75,234	58,932	31,460	27,272
Data processing technologies	19,003	8,965	10,038	15,534	7,781	7,753	3,469	1,184	2,285
Data processing, general	9,456	4,614	4,842	8,335	4,148	4,187	1,121	466	655
Key punch operator and other input preparation	917	241	676	339	189	150	578	52	526
Computer programmer	6,998	3,332	3,666	6,065	2,930	3,135	933	402	531
Computer operator and peripheral equipment operator	1,103	380	723	352	152	200	751	228	523
Data processing equipment maintenance	469	381	88	389	350	39	80	31	49
All other data processing technologies	60	17	43	54	12	42	6	5	1
Health services and paramedical technologies	86,815	9,528	77,287	64,479	7,774	56,705	22,336	1,754	20,582
Health services assistant, general	2,686	840	1,846	1,847	474	1,173	1,039	366	673
Dental assistant	3,408	30	3,378	1,171	20	1,151	2,237	10	2,227
Dental hygiene	3,840	29	3,811	3,734	26	3,708	106	3	103
Dental laboratory	838	425	413	791	397	394	47	28	19
Medical or biological laboratory assistant	3,736	624	3,112	3,417	574	2,843	319	50	269
Animal laboratory assistant	1,401	97	1,304	1,303	94	1,209	98	3	95
Radiologic	3,795	1,033	2,762	3,666	996	2,670	129	37	92
Nursing, R.N.	35,597	2,271	33,326	35,140	2,255	32,885	457	16	441
Nurse, practical	14,799	610	14,189	2,548	171	2,377	12,251	439	11,812
Occupational therapy	858	150	708	816	145	671	42	5	37
Surgical	1,084	118	966	254	50	204	830	68	762
Optical	777	371	406	685	345	340	92	26	66
Medical record	1,107	34	1,073	975	29	946	132	5	127
Medical assistant and medical office assistant	4,963	191	4,772	2,162	133	2,029	2,801	58	2,743
Inhalation therapy	3,144	1,024	2,120	2,196	780	1,438	948	264	682
Psychiatric	1,912	417	1,495	1,699	350	1,349	213	67	146
Electro diagnostic	182	74	108	148	71	77	34	3	31
Institutional management	234	93	141	182	79	103	52	14	38
Physical therapy	984	131	853	965	131	834	19	0	19
All other health services and paramedical technologies	1,470	966	504	978	674	304	492	292	200
Natural science technologies	19,643	11,793	7,850	14,554	8,823	5,731	5,089	2,970	2,119
Natural science, general	1,309	875	434	1,068	677	389	243	198	45
Agriculture	8,607	5,855	2,752	5,936	4,064	1,872	2,671	1,791	880
Forestry and wildlife	1,551	1,239	312	1,378	1,094	284	173	145	28
Food services	4,187	2,479	1,708	3,331	2,011	1,320	856	468	388
Home economics	2,341	214	2,127	1,522	77	1,445	819	137	682
Marine and oceanographic	357	285	72	324	256	68	33	29	4
Laboratory, general	240	89	151	215	79	136	25	10	15
Sanitation and public health inspection	710	575	135	517	397	120	193	178	15
All other natural science technologies	341	182	159	265	168	97	76	14	62
Mechanical and engineering technologies	89,315	81,984	7,331	61,277	56,232	5,045	28,038	25,752	2,286
Mechanical and engineering, general	7,060	6,337	723	6,058	5,514	544	1,002	823	179
Aeronautical and aviation	5,688	5,368	298	4,724	4,440	284	942	928	14
Engineering graphics	5,088	4,067	1,021	3,690	2,956	734	1,398	1,111	287
Architectural drafting	3,879	3,040	839	3,346	2,590	687	602	450	152
Chemical	686	417	269	663	402	261	23	15	8
Automotive	9,641	9,347	294	5,033	4,910	123	4,608	4,437	171
Diesel	3,132	3,094	38	1,630	1,608	22	1,502	1,486	16
Welding	4,838	4,611	227	1,245	1,204	41	3,593	3,407	186
Civil	2,192	1,942	250	2,073	1,842	231	119	100	19
Electronics and machine	20,431	18,831	1,600	16,757	15,685	1,072	3,674	3,146	528
Electromechanical	3,204	3,060	144	2,836	2,720	116	368	340	28
Industrial	3,961	3,581	399	2,437	2,215	222	1,543	1,366	177
Textile	328	133	195	208	43	165	120	90	30
Instrumentation	973	840	133	747	691	56	226	149	77
Mechanical	4,825	4,529	296	3,196	3,017	179	1,629	1,512	117
Nuclear	248	225	21	188	185	21	60	60	0
Construction and building	11,786	11,415	374	5,660	5,470	190	6,129	5,945	184
All other mechanical engineering technologies	1,357	1,147	210	857	760	97	500	387	113
Non-science- and non-engineering-related curriculum	160,044	58,901	101,143	131,572	52,531	79,041	28,472	6,370	22,102

SOURCE: Digest of Education Statistics, 1983-84, National Center for Education Statistics, NCES 83-407, December 1983

TABLE 7-29 (continued)

ASSOCIATE DEGREES AND OTHER AWARDS BASED ON OCCUPATIONAL CURRICULUMS, BY LENGTH AND TYPE OF CURRICULUM AND BY SEX OF RECIPIENT: UNITED STATES, 1980-81 (continued)

Curriculum	All awards			Awards based on organized occupational curriculums of—					
				At least 2 years but less than 4 years			At least 1 year but less than 2 years		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
1	2	3	4	5	6	7	8	9	10
Business and commerce technologies	127,057	43,364	83,693	102,604	38,816	63,788	24,453	4,548	19,905
Business and commerce, general	26,973	14,843	12,130	24,586	13,780	10,826	2,387	1,063	1,304
Accounting	14,819	4,734	10,085	12,661	4,314	8,347	2,158	420	1,738
Banking and finance	1,174	538	636	980	482	498	194	56	138
Marketing, distribution, purchasing, business, and industrial management	28,085	13,418	14,667	25,703	12,327	13,376	2,382	1,091	1,291
Secretarial	31,704	512	31,192	20,433	192	20,241	11,271	320	10,951
Personal service	4,032	382	3,650	1,156	108	1,048	2,876	274	2,602
Photography	1,320	829	491	1,192	750	442	128	79	49
Communications and broadcasting	2,515	1,648	867	1,996	1,266	732	517	382	135
Printing and lithography	1,072	681	391	800	537	263	272	144	128
Hotel and restaurant management	2,520	1,546	974	2,343	1,467	876	177	79	98
Transportation and public utility	1,783	941	842	1,100	650	450	683	291	392
Applied arts, graphic arts, and fine arts	9,434	2,768	6,666	8,425	2,545	5,880	1,009	223	786
All other business and commerce technologies	1,626	524	1,102	1,227	418	809	399	106	293
Public service related technologies	32,987	15,537	17,450	28,968	13,715	15,253	4,019	1,822	2,197
Public service related, general	3,014	686	2,328	2,542	557	1,985	472	129	343
Bible study or religion related	1,568	828	740	1,397	774	623	171	54	117
Education	6,334	764	5,570	5,490	740	4,750	844	24	820
Library assistant	455	91	364	369	83	286	86	3	83
Police, law enforcement, corrections	12,621	8,957	3,664	11,477	8,042	3,435	1,144	915	229
Recreation and social work related	4,045	970	3,075	3,856	868	2,790	389	104	285
Fire control	2,392	2,314	78	1,995	1,934	61	397	380	17
Public administration and management	862	521	341	724	417	307	138	104	34
Other	1,696	406	1,290	1,318	297	1,021	378	109	269

SOURCE: Engineering and Technology Degrees 1977-1983, Engineering Manpower Commission

TABLE 7-30

CERTIFICATES AWARDED IN ENGINEERING AND INDUSTRIAL TECHNOLOGY BY SEX AND MINORITY GROUP, 1977-1983

	ENGINEERING TECHNOLOGY							INDUSTRIAL TECHNOLOGY					
	1977	1978	1979	1980	1981	1982	1983	1977	1978	1979	1980	1981	1982
Total	**614**	**661**	**430**	**533**	**509**	**402**	**526**	**1,246**	**1,584**	**731**	**406**	**1,471**	**1,502**
Women	18	55	13	41	79	77	23	28	65	39	41	137	143
Blacks	21	16	27	96	22	30	49	34	101	43	22	101	118
Hispanics	2	12	14	24	8	11	10	18	78	33	13	103	32
Asian/Pacific	2	4	2	13	4	60	33	4	56		4	11	7
American Indian	10	10	2	4	6	1	6	34	131		5	9	16

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 7-31

Science, Engineering and Related Technicians by Field, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Technicians															
Biological	46404	26901	23059	1706	144	693	35	1264	19503	16393	1521	47	555	12	975
	100.00%	57.97%	49.69%	3.68%	0.31%	1.49%	0.08%	2.72%	42.03%	35.33%	3.28%	0.10%	1.20%	0.03%	2.10%
Chemical	73423	56768	48437	4497	153	1456	58	2168	16655	13570	1838	78	470	15	684
	100.00%	77.32%	65.97%	6.12%	0.21%	1.98%	0.08%	2.95%	22.68%	18.48%	2.50%	0.11%	0.64%	0.02%	0.93%
Science, Misc.	73033	48724	42389	2474	185	1512	73	2091	24309	19914	2301	118	733	32	1211
	100.00%	66.72%	58.04%	3.39%	0.25%	2.07%	0.10%	2.86%	33.28%	27.27%	3.15%	0.16%	1.00%	0.04%	1.66%
Electrical/Electronic	266184	235581	204079	12442	893	7974	341	9852	30603	23352	3663	146	1265	44	2123
	100.00%	88.50%	76.67%	4.67%	0.34%	3.00%	0.13%	3.70%	11.50%	8.78%	1.38%	0.05%	0.48%	0.02%	0.80%
Industrial Engineering	10644	8404	7638	400	20	46	12	288	2240	1945	163	7	25	0	100
	100.00%	78.96%	71.76%	3.76%	0.19%	0.43%	0.11%	2.71%	21.04%	18.27%	1.53%	0.07%	0.23%	0.00%	0.94%
Mechanical Engineering	15592	14588	13108	637	35	321	29	458	1004	838	86	0	8	0	72
	100.00%	93.56%	84.07%	4.09%	0.22%	2.06%	0.19%	2.94%	6.44%	5.37%	0.55%	0.00%	0.05%	0.00%	0.46%
Engineering, Misc.	272034	207139	186462	9127	716	3951	197	6686	64895	53938	6054	166	2094	104	2539
	100.00%	76.14%	68.54%	3.36%	0.26%	1.45%	0.07%	2.46%	23.86%	19.83%	2.23%	0.06%	0.77%	0.04%	0.93%
Surveying/Mapping	53094	48572	44060	1398	635	414	21	2044	4522	3752	458	83	89	0	142
	100.00%	91.48%	82.98%	2.63%	1.20%	0.78%	0.04%	3.85%	8.52%	7.07%	0.86%	0.12%	0.17%	0.00%	0.31%
Technicians, Misc.	338002	237690	201792	13456	840	12637	408	8557	100312	81030	10717	489	4340	145	3591
	100.00%	70.32%	59.70%	3.98%	0.25%	3.74%	0.12%	2.53%	29.68%	23.97%	3.17%	0.14%	1.28%	0.04%	1.06%
Drafting Occupations	329467	274659	237890	12520	1319	8324	302	14304	54808	47509	2631	257	1832	52	2527
	100.00%	83.36%	72.20%	3.80%	0.40%	2.53%	0.09%	4.34%	16.64%	14.42%	0.80%	0.08%	0.56%	0.02%	0.77%

CHAPTER 8

AGRICULTURAL, BIOLOGICAL, MEDICAL AND HEALTH SCIENCES

AGRICULTURAL AND BIOLOGICAL SCIENCES 200
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FIELD: Agricultural & Biological Sciences

SOURCE: Tables throughout Professional Women and Minorities

TABLE 8-1

SUMMARY TABLE

Proportion of Women in the Agricultural & Biological Sciences

	Agricultural		Biological	
Degrees Granted	**1960-76**	**1982**	**1960-76**	**1982**
Bachelor's	7.9	31.3	30.1	45.4
Master's	7.4	25.2	29.5	41.7
Doctorates - 1983	3.2	12.9	18.5	33.0
General Labor Force	**1972**	**1980**	**1972**	**1983**
	5.5	22.7	28.6	40.8
Doctoral Labor Force	**1973**	**1983**	**1973**	**1983**
	1.3	4.0	13.6	19.4
Academic Labor Force	**1974-75**	**1982-83**	**1974-75**	**1982-83**
Doctoral (1981)	1.3	2.5	14.9	16.3
Total	12.1	10.4	19.7	23.2
Federal Labor Force	**1976**	**1982**	**1976**	**1982**
	0.6	6.7	16.0	21.1

TABLE 8-2

SUMMARY TABLE

Proportion of Minorities in the Life Sciences - Agricultural & Biological Sciences

	Blacks		American Indian		Asian/ Pacific		Hispanic	
	Ag.	Biol.	Ag.	Biol.	Ag.	Biol.	Ag.	Biol.
Degrees Granted								
Bachelor's	0.3	5.3	0.4	0.3	1.4	3.4	1.1	2.6
Master's	1.8	2.9	0.2	0.3	1.7	2.4	1.6	1.2
Doctorates, 1983	1.0	1.2	0.1	0.1	3.2	4.4	0.9	1.2
General Labor Force, 1983	5.0	2.4	0.3	0.2	2.6	5.4	2.5	1.8
Doctoral Labor Force, 1983	0.7	1.2	0.2	0.1	6.6	6.6	1.9	1.1
Federal Labor Force, 1982	3.0	4.4	1.7	0.7	1.2	3.4	2.2	1.4

FIELD: Agriculture Sciences

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1983, National Research Council

TABLE 8-3

DOCTORATES AWARDED FROM 1920 TO 1983 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978-FY1981			FY1982			FY1983		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women[4]	% W
Agricultural Sciences, Subtotal	13,662	230	1.7	5,095	312	6.1	4,243	417	9.8	951	171	18.0	1,172	151	12.9
Agricultural Economics[1]	536	5	0.9	825	21	2.5	640	41	6.4	179	20	11.2	157	18	11.5
Animal Breeding & Genetics[2]													25	4	16.0
Animal Husbandry[3]	2,460	35	1.3	116	3	2.6	91	3	3.3	22	3	13.6			
Animal Sci.[4] & Animal Nutrition[5]				599	34	5.7	481	46	9.6	133	17	12.8	56	6	10.7
Animal Sciences, Other[2]													92	9	9.8
Agronomy	3,804	27	0.7	685	13	1.9	603	42	7.0	159	16	10.1	149	11	7.4
Plant Breeding & Genetics[2]													71	13	18.3
Plant Pathology[2]													92	19	20.7
Phytopathology[3]	1,949	62	3.2	458	34	7.4	394	60	15.2	114	27	23.7			
Plant Sciences, Other[2]													16	1	6.3
Food Science & Technology[6]	233	24	10.3	502	92	18.3	430	99	23.0	110	30	27.3			
Food Sciences[6]													141	38	27.0
Soil Sciences[7]	217	6	2.8	434	6	1.4	337	21	6.2	83	15	18.1	85	7	8.2
Horticulture Sciences	1,624	37	2.3	283	13	4.6	292	35	12.0	88	19	21.6	72	9	12.5
Fisheries Sciences[8]													36	6	16.7
Fish and Wildlife[8]	501	6	1.2	288	73	25.3	266	20	7.5	65	7	10.8			
Wildlife Management[8]													31	1	3.2
Forestry Science	1,031	1	0.1	387	5	1.3	350	20	5.7	78	4	5.1	90	4	4.4
Agriculture, General[9]	175	2	1.1	32	2	6.3	22	3	13.6	5	1	20.0	7	0	0.0
Agriculture, Other	1,132	25	2.2	486	16	3.3	337	27	8.0	94	12	12.8	52	5	9.6

1 Added in 1971. 2 Added in 1983. 3 Dropped in 1983. 4 Added in 1973. Dropped in 1983. 5 Added in 1975. Separate field in 1983.

6 Added in 1971; became "Food Sciences" in 1983. 7 Added in 1968 as "Range Management." Changed to "Soils & Soil Science" in 1971, and to "Soil Sciences" in 1983. Previous cases under "Range Management" were converted to "Agriculture, Other." 8 Separated to "Fisheries Sciences" and "Wildlife Management" in 1983. 9 Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "General" classification of their respective fields.

FIELD: Agricultural Sciences

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 8-4

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	93,274	1,657	1.8	14,111	262	1.9
1960-61 thru 1969-70	59,136	2,001	3.4	13,009	580	4.5
1970-71	10,884	517	4.8	2,167	135	6.2
1971-72	13,560	740	5.5	2,691	190	7.1
1972-73	14,819	1,104	7.5	2,822	222	7.9
1973-74	16,303	1,576	9.7	2,939	289	9.8
1974-75	17,573	2,472	14.1	3,076	364	11.8
1975-76	19,460	3,570	18.3	3,351	478	14.3
1976-77	21,467	4,777	22.3	3,724	547	14.7
1977-78	22,724	5,594	24.6	4,036	756	18.7
1978-79	23,247	6,303	27.1	4,007	808	20.2
1979-80	22,903	6,787	29.6	3,987	894	22.4
1980-81	21,886	6,732	30.8	4,003	942	23.5
1981-82	21,029	6,586	31.3	4,163	1,049	25.2
TOTAL	378,265	50,416	13.3	68,086	7,516	11.0

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1983, National Research Council

TABLE 8-5

DOCTORAL DEGREES BY SEX, 1920-1983

YEAR	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	4,772	60	1.3
FY 1960 thru FY 1969	5,119	79	1.5
FY 1970 thru FY 1972	2,770	87	3.1
FY 1973	953	37	3.9
FY 1974	1,010	48	4.8
FY 1975	1,066	46	4.3
FY 1976	951	54	5.7
FY 1977	924	63	6.8
FY 1978	1,012	70	6.9
FY 1979	1,008	91	9.0
FY 1980	1,072	109	10.2
FY 1981	1,150	147	12.8
FY 1982	1,130	171	15.1
FY 1983	1,172	151	12.9
TOTAL	**24,109**	**1,213**	**5.0**

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Biological Sciences

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1983, National Research Council

TABLE 8-6

DOCTORATES AWARDED FROM 1920 TO 1983 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978-FY1981			FY1982			FY1983		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Biological Sciences	48,689	7,278	14.9	16,683	3,671	22.0	13,560	3,720	27.4	3,613	1,061	29.4	3,732	1,231	33.0
Biochemistry	9,600	1,519	15.8	3,086	699	22.7	2,523	679	26.9	650	166	25.5	646	194	30.0
Biophysics	1,126	101	9.0	611	70	11.5	450	64	14.2	91	13	14.3	88	16	18.2
Bacteriology [1]													10	4	40.0
Genetics [1]	2,429	329	13.5	692	193	27.9	581	213	36.7	176	6.5	36.9			
Genetics, Plants [1]													19	5	26.3
Genetics, Human/Animal [1]													95	24	25.3
Pathology [2]	691	56	8.1	418	61	14.6	389	104	26.7	97	26	26.8			
Pathology, Plant [2]													29	8	27.6
Pathology, Human/Animal [2]													95	43	45.3
Physiology [3]	2,349	350	14.9												
Physiology, Plant [3]	877	82	9.4	341	66	19.4	163	38	23.3	56	13	23.2	67	24	35.8
Physiology, Human/Animal [3]	2,686	396	14.7	1,605	291	18.1	1,293	282	21.8	309	76	24.6	243	68	28.0
Botany, Other [4]	5,072	815	16.1	885	182	20.6	580	164	44.9	146	42	28.8	116	39	33.6
Anatomy	1,770	333	18.8	617	139	22.5	597	182	30.5	162	61	37.7	104	36	34.6
Biometrics & Biostatistics [5]	329	54	16.4	204	42	20.6	179	45	25.1	58	17	29.3	45	22	48.9
Cell Biology [6]	946	60	6.3	825	89	10.8	709	133	18.8	173	42	24.3	119	41	34.5
Ecology [6]	339	104	30.7	109	33	30.3	67	28	41.8	10	3	30.0	183	37	20.2
Embryology [6]										41	18	43.9	13	7	53.8
Cytology [5]													28	14	50.0
Endocrinology [7]	3,241	152	4.7	824	64	7.7	611	61	10.0	170	23	13.5	141	20	14.9
Entomology [7]				385	113	29.4	500	177	35.4	150	58	38.7	154	66	42.9
Immunology [8]	447	120	26.8	690	203	29.4	679	215	31.7	224	81	36.2	225	76	33.8
Molecular Biology [9]	6,604	1,144	17.3	1,795	475	26.5	1,412	436	30.9	326	91	27.9	308	117	37.9
Microbiology [10]										117	38	32.5	134	49	36.7
Neurosciences [11]	543	154	28.4	166	88	53.0	386	245	63.5	119	70	58.8	111	72	64.9
Nutritional Sciences [7]				80	11	13.8	74	18	24.3	14	2	14.3	9	0	0.0
Parasitology [8]													60	16	26.7
Toxicology [5]													217	71	32.7
Pharmacology [12]	216	12	5.6	62	5	8.1	13	4	30.8						
Human/Animal [5]	7,366	1,056	14.4	1,372	265	19.3	904	200	22.1	198	45	22.7	192	63	32.8
Hydrobiology [13]	1,024	194	18.9	921	266	28.9	795	237	29.8	197	62	31.5	174	60	34.5
Zoology Other	1,034	247	23.9	995	316	31.8	655	195	29.8	129	49	38.0	106	39	36.8
Biological Sciences, General [14]															
Biological Sciences, Other															

[1] Broken out to "Plant Genetics" and "Human and Animal Genetics" in 1983. [2] Broken out to "Plant Pathology" and "Human and Animal Pathology" in 1983. [3] In 1962, "Physiology" was broken out into "Animal Physiology" and "Plant Physiology". [4] "Botany" until 1983, when it became "Botany, Other". [5] Added in 1983. [6] Added in 1962. [7] Added in 1973. [8] Added in 1968. [9] Originally specified as "Microbiology". "Bacteriology" was added in 1970. In 1983, they were broken out separately. [10] Added in 1982. [11] Dropped in 1960. Added in 1976 with Dietetics. Became "Nutritional Sciences" in 1983. [12] Dropped in 1980. [13] Became "Zoology, Other" in 1983.

FIELD: Biological Sciences

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 8-7

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	159,518	41,140	25.8	25,843	5,432	21.0
1960-61 thru 1969-70	255,783	72,606	28.4	41,177	11,404	27.7
1970-71	35,411	10,414	29.4	5,756	1,943	33.8
1971-72	37,638	11,147	29.6	6,126	2,027	33.1
1972-73	42,672	12,824	30.0	6,294	1,924	30.6
1973-74	48,856	15,378	31.5	6,581	2,014	30.6
1974-75	52,236	17,416	33.3	6,591	1,976	30.1
1975-76	54,913	19,119	34.8	6,621	2,103	31.8
1976-77	53,605	19,387	36.2	7,114	2,396	33.7
1977-78	52,213	20,223	38.7	6,851	2,430	35.5
1978-79	49,576	20,105	40.6	6,879	2,592	37.7
1979-80	47,111	19,976	42.4	6,536	2,425	37.1
1980-81	43,216	19,067	44.1	5,978	2,324	38.9
1981-82	41,369	18,885	45.7	5,874	2,448	41.7
TOTAL	974,117	317,678	32.6	144,221	43,438	30.1

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1983, National Research Council

TABLE 8-8

DOCTORAL DEGREES BY SEX, 1920-1983

YEAR	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	16,537	2,428	14.7
FY 1960 thru FY 1969	13,933	2,026	14.5
FY 1970 thru FY 1972	8,052	1,386	17.2
FY 1973	2,743	590	21.5
FY 1974	3,190	687	21.5
FY 1975	3,247	769	23.7
FY 1976	3,245	752	23.1
FY 1977	3,172	729	23.0
FY 1978	3,192	815	25.5
FY 1979	3,317	889	26.8
FY 1980	3,411	955	28.0
FY 1981	3,397	986	29.0
FY 1982	3,502	1,033	29.5
FY 1983°	3,732	1,231	33.0
TOTAL	**74,670**	**15,276**	**20.5**

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

°In 1983, definitions were changed to add "biomedical" sciences to the biological science group. Thus, the totals for 1983 are not completely comparable with previous years.

FIELD: Life Sciences

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and 1980-1983 Summary Report, Doctorate Recipients from United States Universities, National Research Council, 1981-1983

TABLE 8-9

NUMBER OF Ph.D. RECIPIENTS BY TYPE OF CITIZENSHIP, 1960-1983

BIOSCIENCES YEAR	TOTAL	U.S.	FOREIGN			Citizenship not Known
			TOTAL	Immigrants	Non-Immigrants	
1960	1,246	1,048	188	40	148	10
1961	1,244	1,020	208	35	173	16
1962	1,397	1,167	215	14	201	15
1963	1,510	1,252	246	37	209	12
1964	1,702	1,376	293	43	250	33
1965	1,963	1,583	360	53	307	20
1966	2,135	1,740	365	52	313	30
1967	2,361	1,947	378	80	298	36
1968	2,822	2,324	470	111	359	28
1969	3,084	2,586	463	123	340	35
1970	3,359	2,813	522	161	361	24
1971	3,652	3,063	511	199	312	78
1972	3,663	3,049	535	225	310	79
1973	3,731	3,085	570	251	319	76
1974	3,585	2,829	587	217	370	169
1975	3,636	3,024	532	202	330	80
1976	3,692	3,090	500	170	330	102
1977	3,484	2,909	479	160	319	96
1978	3,508	2,988	432	142	290	88
1979	3,640	3,119	429	132	297	92
1980	3,411	2,944	392	126	266	75
1981	3,397	2,948	363	111	252	86
1982	3,502	2,973	417	105	312	112
1983	3,732	3,202	437	115	322	93
AGRICULTURE SCIENCES						
1960	414	306	107	16	91	1
1961	438	338	98	6	92	2
1962	470	344	126	14	112	
1963	466	365	97	7	90	4
1964	517	366	149	14	135	2
1965	576	380	189	17	172	7
1966	576	379	186	11	175	11
1967	606	408	195	13	182	3
1968	681	450	225	29	196	6
1969	720	488	229	28	201	3
1970	804	564	237	38	199	3
1971	902	597	302	65	237	3
1972	853	533	316	85	231	4
1973	853	543	308	75	233	3
1974	820	461	336	65	271	23
1975	904	563	336	70	266	5
1976	788	491	281	37	244	8
1977	782	488	283	27	256	11
1978	853	531	310	43	267	12
1979	855	543	294	29	265	18
1980	1,072	666	391	42	349	15
1981	1,150	585	434	46	388	31
1982	1,130	741	364	32	332	25
1983	1,172	728	411	45	366	33

FIELD: Life Sciences

SOURCE: Supply and Demand for Scientists and Engineers, Scientific Manpower Commission, 1982; Data Source: National Center for Education Statistics

TABLE 8-10

DEGREES IN AGRICULTURAL AND BIOLOGICAL SCIENCES 1970-1982 PROJECTED TO 1989

	BACHELOR'S				MASTER'S				Ph. D.			
	Agriculture/ Nat. Resources		Biological Sciences		Agriculture/ Nat. Resources		Biological Sciences		Agriculture Nat. Resources		Biological Sciences	
Year	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W
1970	12,382	4.1	37,031	28.0	2,197	6.3	5,800	31.5	1,004	2.8	3,289	14.3
1971	12,672	4.2	35,743	29.1	2,457	5.9	5,728	33.5	1,086	2.9	3,654	16.3
1972	13,516	5.5	37,293	29.4	2,680	7.1	6,101	33.0	971	2.7	3,653	17.0
1973	14,756	7.4	42,233	29.8	2,807	7.8	6,263	30.5	1,059	2.6	3,636	19.5
1974	16,253	9.7	48,340	31.2	2,928	9.8	6,552	30.5	930	3.5	3,439	20.3
1975	17,528	14.1	51,741	33.1	3,067	11.9	6,550	30.0	991	3.3	3,384	22.0
1976	19,402	18.3	54,275	34.6	3,340	14.3	6,582	31.7	928	6.6	3,392	21.5
1977	21,467	22.3	53,605	36.2	3,724	14.7	7,114	33.7	893	6.9	3,397	21.4
1978	22,650	24.6	51,502	38.4	4,023	18.8	6,806	35.4	971	6.4	3,309	24.1
1979	23,247	27.1	49,576	40.6	4,007	20.2	6,879	37.7	950	7.7	3,548	25.6
1980	22,903	29.6	47,111	42.4	3,987	22.4	6,536	37.1	991	11.3	3,638	26.0
1981	21,886	30.8	43,216	44.1	4,003	23.5	5,978	38.9	1,067	11.9	3,718	28.3
1982	21,029	31.3	41,639	45.4	4,163	25.2	5,874	41.7	1,079	14.3	3,743	29.1
PROJECTED												
1981	25,740	26.4	55,890	38.7	4,370	24.9	6,880	41.0	1,100	6.3	3,510	25.1
1982	26,430	26.3	57,480	39.8	4,570	25.2	7,020	41.0	1,120	6.3	3,480	24.4
1983	27,080	26.6	57,570	39.8	4,760	25.8	7,120	41.6	1,110	6.3	3,350	24.8
1984	27,550	27.2	57,080	39.9	4,850	24.9	7,160	42.2	1,100	6.4	3,250	25.2
1985	27,800	27.6	56,140	40.1	4,990	24.2	7,170	42.0	1,080	6.5	3,140	25.5
1986	27,920	28.0	55,980	39.7	5,050	24.0	7,090	42.2	1,080	6.5	3,040	26.0
1987	28,000	28.4	54,910	41.9	5,100	23.3	6,990	42.5	1,070	6.5	2,950	26.4
1988	28,070	28.3	54,870	42.9	5,100	22.4	6,760	42.0	1,070	7.5	2,850	26.7
1989	28,550	28.8	55,030	43.5	5,120	21.7	6,560	42.2	1,060	7.5	2,760	27.2

SOURCE: 1980 Census of Occupations, Special EEO File, Bureau of the Census

TABLE 8-11

LIFE SCIENTISTS IN ACADEMIC AND NON-ACADEMIC EMPLOYMENT BY SEX AND RACE/ETHNICITY, 1980

	TOTAL		Biolog. Science Teachers		Life & Other Biol. Scientists		Agric/Forestry Teachers		Other Agric/ Food Scientists		Forestry/Conserv. Scientists	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	**119,699**	**100.00**	**9,651**	**100.00**	**46,079**	**100.00**	**3,813**	**100.00**	**24,589**	**100.00**	**35,567**	**100.00**
MALES	**91,617**	**76.54**	**6,537**	**67.73**	**30,840**	**66.93**	**3,246**	**85.13**	**19,009**	**77.31**	**31,985**	**89.93**
White*	83,863	70.06	6,095	63.15	27,825	60.39	3,009	78.91	17,236	70.10	29,662	83.40
Black*	2,867	2.40	122	1.26	871	1.89	122	3.20	797	3.24	955	2.69
Indian/Alaskan Nat.*	600	0.50	8	0.08	60	0.13	18	0.47	47	0.19	467	1.31
Asian/Pacific Isl.*	2,397	2.00	230	2.38	1,483	3.22	41	1.08	438	1.78	205	0.58
Other Race*	133	0.11	7	0.07	60	0.13	18	0.47	12	0.05	33	0.09
Hispanic	1,796	1.50	75	0.78	541	1.17	38	1.00	479	1.95	663	1.86
FEMALES	**28,082**	**23.42**	**3,114**	**32.27**	**15,239**	**33.07**	**567**	**14.87**	**5,580**	**22.69**	**3,582**	**10.07**
White*	24,116	20.15	2,784	28.83	12,898	27.99	521	13.66	4,780	19.44	3,133	8.81
Black*	1,639	1.37	171	1.77	806	1.75	37	0.97	437	1.78	188	0.53
Indian/Alaskan Nat.*	171	0.14	13	0.13	52	0.11	0	0.00	37	0.15	69	0.19
Asian/Pacific Isl.*	1,358	1.13	113	1.17	1,012	2.20	2	0.05	198	0.81	63	0.18
Other Race*	37	0.03	5	0.05	32	0.07	0	0.00	0	0.00	0	0.00
Hispanic	733	0.61	30	0.31	439	0.95	7	0.18	128	0.52	129	0.36

* Non-Hispanic

FIELD: Biological/Agricultural Sciences

SOURCE: Federal Civilian Workforce Statistics, Affirmative Employment Statistics, U.S. Office of Personnel Management, CIG-82-71, September 30, 1982

TABLE 8-12

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN THE BIOLOGICAL/AGRICULTURAL SCIENCES BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 30, 1982

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		AM. INDIAN		ASIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% I	No.	% A	No.	% W
General Biological Sciences	4,582	931	20.3	454	9.9	133	2.9	228	5.0	58	1.3	60	1.3	108	2.4	4,128	90.1
Microbiology	1,816	646	35.6	244	13.4	98	5.4	111	6.1	40	2.2	3	0.2	90	5.0	1,572	86.6
Biological Technician	6,860	2,635	38.4	1,364	19.9	480	7.0	939	13.7	252	3.7	44	0.6	129	1.9	5,496	80.1
Agricultural Extension	60	14	23.3	2	3.3	1	1.7	1	1.7	1	1.7	0	0.0	0	0.0	58	96.7
Ecology	254	34	13.4	8	3.1	0	0.0	3	1.2	3	1.2	0	0.0	2	0.8	246	96.9
Zoology	141	26	18.4	26	18.4	3	2.1	2	1.4	1	0.7	0	0.0	23	16.3	115	81.6
Physiology	481	96	20.0	40	8.3	9	1.9	15	3.1	9	1.9	1	0.2	15	3.1	441	91.7
Entomology	775	37	4.8	45	5.8	3	0.4	16	2.1	7	0.9	3	0.4	19	2.5	730	94.2
Botany	186	59	31.7	14	7.5	5	2.7	3	1.6	4	2.2	0	0.0	7	3.8	172	92.5
Plant Pathology	316	15	4.7	21	6.6	3	0.9	6	1.9	3	0.9	0	0.0	12	3.8	295	93.4
Plant Physiology	267	16	6.0	15	5.6	3	1.1	2	0.7	1	0.4	0	0.0	12	4.5	252	94.4
Plant Protection & Quarantine	1,243	166	13.4	269	21.6	45	3.6	45	3.6	107	8.6	3	0.2	114	9.2	974	78.4
Horticulture	107	21	19.6	11	10.3	3	2.8	6	5.6	3	2.8	0	0.0	2	1.9	96	89.7
Genetics	259	25	9.7	17	6.6	1	0.4	1	0.4	3	1.2	0	0.0	13	5.0	242	93.4
Range Conservation	1,430	113	7.9	110	7.7	3	0.2	2	0.1	62	4.3	45	3.1	1	0.1	1,320	92.3
Soil Conservation	4,713	191	4.1	477	10.1	14	0.3	276	5.9	96	2.0	81	1.7	24	0.5	4,236	89.9
Forestry	6,843	404	5.9	331	4.8	18	0.3	31	0.5	70	1.0	186	2.7	44	0.6	6,512	95.2
Soil Science	2,011	99	4.9	171	8.5	3	0.1	108	5.4	25	1.2	18	0.9	20	1.0	1,840	91.5
Agronomy	354	7	2.0	17	4.8	0	0.0	6	1.7	5	1.4	2	0.6	4	1.1	337	95.2
Agricultural Management	3,130	241	7.7	328	10.5	11	0.4	196	6.3	97	3.1	25	0.8	10	0.3	2,802	89.5
General Fish & Wildlife Mgmt.	162	1	0.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	162	100.0
Fishery Biology	1,318	116	8.8	95	7.2	14	1.1	30	2.3	17	1.3	16	1.2	32	2.4	1,223	92.8
Wildlife Refuge Management	365	12	3.3	15	4.1	2	0.5	1	0.3	6	1.6	7	1.9	1	0.3	350	95.9
Wildlife Biology	1,387	176	12.7	58	4.2	11	0.8	7	0.5	26	1.9	12	0.9	13	0.9	1,329	95.8
Husbandry	111	4	3.6	5	4.5	1	0.9	4	3.6	0	0.0	0	0.0	1	0.9	106	95.5

FIELD: Health Professions

SOURCE: Tables throughout Professional Women and Minorities

TABLE 8-13

CURRENT ENROLLMENTS AND GRADUATES IN THE HEALTH PROFESSIONS BY SEX

FIELD	FIRST YEAR ENROLLMENTS			TOTAL ENROLLMENTS			GRADUATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
Medicine (1983-84)	17,150	5,653	33.0	67,327	20,635	30.6	15,728	4,193	26.7
Osteopathic Medicine (1982-83)				5,822	1,317	22.6	1,317	261	19.8
Dentistry (1983-84)	5,371	1,313	24.4	21,428	4,733	22.1	5,274	1,089	20.6
Veterinary Medicine (1983-84)	2,320	1,127	48.6	8,816	4,152	47.1	2,012	822	40.9
Optometry (1982-83)	1,682	428	25.4	4,561	1,173	25.7	1,120	246	22.0
Pharmacy (1983-84)				18,831	9,899	52.6	5,919	2,925	49.4
Podiatry (1983-84)	724	150	20.7	2,556	476	18.6	631	79	12.5
Nursing, B.S. (1981)							32,794	31,140	95.0

TABLE 8-14

TOTAL ENROLLMENTS IN SELECTED U.S. HEALTH PROFESSIONS SCHOOLS BY RACIAL/ETHNIC CATEGORY

FIELD	TOTAL	TOTAL MINORITY	BLACK		AMERICAN INDIAN		SPANISH SURNAME		ASIAN AMERICAN		WHITE AND ALL OTHERS	
			No.	%	No.	%	No.	%	No.	%	No.	%
Medicine (1983-84)	67,327	9,873	3,892	5.8	258	0.4	2,433	3.6	3,290	4.9	57,450	85.3
Osteopathic Medicine (1982-83)	5,822	355	116	2.0	25	0.4	81	1.4	133	2.3	5,467	93.9
Dentistry (1983-84)	21,428	3,024	1,000	4.7	64	0.3	603	2.9	1,357	6.4	18,404	85.9
Veterinary Medicine (1983-84)[1]	8,816	461	203	2.3	33	0.4	128	1.5	90	1.0	8,355	94.8
Optometry (1982-83)	4,561	498	76	1.7	19	0.4	107	2.3	296	6.5	4,063	89.1
Pharmacy (1983-84)	18,381	4,145	1,019	5.5	42	0.2	787	4.3	1,122	6.1	14,236	77.5
Podiatry (1983-84)	2,556	297	170	6.7	9	0.4	41	1.6	68	2.7	2,259	88.3
Nursing (1980-81)[2]	238,473	23,315	14,365	6.0			5,795	2.4	3,155[3]	1.3	215,158	90.2
Baccalaureate	96,099	11,147	6,126	6.4			3,339	3.5	1,682[3]	1.8	84,952	88.4
Associate Degree	101,365	9,800	6,522	6.4			2,034	2.0	1,244[3]	1.2	91,565	90.3
Diploma	41,009	2,368	1,717	4.2			422	1.0	229[3]	0.6	38,641	94.2

[1] Total and Total Minority data are for 1979-80. Racial/Ethnic breakouts are for 1972.

[2] Based only on programs which reported.

[3] Includes American Indian and Aleut.

FIELD: Health Professions

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 8-15

MEDICAL AND HEALTH PROFESSIONALS BY SEX AND RACE/ETHNICITY, 1980

	Dentists		Physicians		Optometrists		Podiatrists		Veterinarians	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	125,291	100.00	433,255	100.00	24,605	100.00	7,781	100.00	34,355	100.00
MALES	116,916	93.32	375,289	86.62	22,569	91.73	7,124	91.56	29,797	86.73
White*	108,990	86.99	317,142	73.20	21,544	87.56	6,805	87.46	28,706	83.56
Black*	2,666	2.13	10,090	2.33	198	0.80	203	2.61	402	1.17
Indian/Alaskan Native*	167	0.13	386	0.09	36	0.15	0	0.00	56	0.16
Asian/Pacific Isl.*	3,226	2.57	30,656	7.08	461	1.87	54	0.69	359	1.04
Other Race*	55	0.04	732	0.17	8	0.03	0	0.00	23	0.07
Hispanic	1,812	1.45	16,238	3.76	322	1.31	62	0.80	251	0.73
FEMALES	8,357	6.68	57,966	13.38	2,036	8.27	657	8.44	4,558	13.27
White*	6,890	5.50	40,700	9.39	1,765	7.17	538	6.91	4,216	12.27
Black*	468	0.37	3,153	0.73	56	0.23	78	1.00	120	0.35
Indian/Alaskan Native*	18	0.01	127	0.03	8	0.03	0	0.00	6	0.02
Asian/Pacific Isl.	606	0.48	11,262	2.60	97	0.39	41	0.53	73	0.21
Other Race*	12	0.01	154	0.04	0	0.00	0	0.00	6	0.02
Hispanic	381	0.30	2,570	0.59	110	0.45	0	0.00	137	0.40

	Dieticians		Pharmacists		Med. & Health Managers		Registered Nurses		Lic. Practical Nurses	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	67,270	100.00	145,637	100.00	110,881	100.00	1,285,299	100.00	435,176	100.00
MALES	6,787	10.09	110,635	75.97	54,583	49.23	52,755	4.10	14,764	3.39
White*	4,224	6.28	101,051	69.39	48,300	43.56	42,605	3.31	10,652	2.45
Black*	1,907	2.83	2,949	2.02	3,872	3.49	5,363	0.42	2,910	0.67
Indian/Alaskan Native*	25	0.04	158	0.11	205	0.18	175	0.01	128	0.03
Asian/Pacific Isl.*	179	0.27	4,313	2.96	709	0.64	1,892	0.15	322	0.07
Other Race*	27	0.04	136	0.09	38	0.03	110	0.01	18	0.00
Hispanic	425	0.63	2,028	1.39	1,459	1.32	2,610	0.20	734	0.17
FEMALES	60,483	89.91	35,002	24.03	56,298	50.77	1,232,544	95.90	420,412	96.61
White*	43,289	64.35	29,385	20.18	47,786	43.10	1,071,709	83.38	322,480	74.10
Black*	12,493	18.57	1,766	1.21	5,608	5.06	90,009	7.00	74,942	17.22
Indian/Alaskan Native*	307	0.46	89	0.06	359	0.32	3,681	0.29	2,662	0.61
Asian/Pacific Is .	2,304	3.43	2,269	1.56	805	0.73	41,054	3.19	5,575	1.28
Other Race*	32	0.05	29	0.02	16	0.01	1,161	0.09	425	0.10
Hispanic	2,058	3.06	1,464	1.01	1,724	1.55	24,930	1.94	14,328	3.29

* Non-Hispanic

FIELD: Health Sciences

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1983, National Research Council

TABLE 8-15A

DOCTORATES AWARDED FROM 1920 TO 1983 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920–FY1972			FY1973–FY1977			FY1978–FY1981			FY1982			FY1983		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Health Sciences Subtotal	6,761	798	11.8	3,206	823	25.7	3,327	957	28.8	951	389	40.9	636	335	52.7
Medicine & Surgery[1]	637	35	5.5	24	0	0.0									
Pharmacy	852	47	5.5	315	28	8.9	280	43	15.4	81	12	14.8	81	19	23.5
Public Health & Epidemiology[2]	1,163	192	16.5	521	175	33.6	497	232	46.7	159	72	45.3			
Public Health													51	29	56.9
Epidemiology													76	36	47.4
Veterinary Medicine	497	6	1.2	149	9	6.0	150	21	14.0	41	7	17.1	45	12	26.7
Hospital Administration[3]	68	4	5.9	26	1	3.8									
Optometry, Ophthalmology[4]	35	2	5.7												
Dentistry[4]	24	1	4.2												
Pharmacology	2,239	223	10.0	905	155	17.1	967	206	21.3	276	76	27.5			
Audiology & Speech Pathology[5]	504	127	25.2	702	264	37.6	545	84	15.4	129	79	61.2	113	70	61.9
Nursing[6]							248	237	95.6	106	102	96.2	126	119	94.4
Environmental Health[6]							153	34	22.2	39	7	17.9	38	6	15.8
Health Sciences, General[7]	89	12	13.5	80	18	22.5	127	21	16.5	16	7	43.8	20	4	20.0
Health Sciences, Other[7 8]	653	139	21.3	484	173	35.7	360	79	21.9	104	27	26.0	86	40	46.5

1 Dropped as a separate field in 1977.
2 "Epidemiology" added in 1977. Two fields broken out in 1983.
3 Dropped in 1978. It is now included in "Health Sciences, Other".
4 Dropped in 1961. It is now included with "Health Sciences, Other".
5 Added in 1968 as "Speech and Hearing Sciences". Name changed in 1983.
6 Added in 1978.
7 Added in 1962, as "Medical Sciences...". Name changed to "Health Sciences" in 1983. Included "Psychiatry" which was dropped as a separate field in 1962.
8

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 8-16

HEALTH AND MEDICAL TECHNOLOGISTS, TECHNICIANS, ASSISTANTS AND AIDES BY SEX AND RACE/ETHNICITY, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Dental Assistants	158117	3294	2471	422	14	195	0	192	154823	137275	6213	818	2241	77	8199
	100.00%	2.08%	1.56%	0.27%	0.01%	0.12%	0.00%	0.12%	97.92%	86.82%	3.93%	0.52%	1.42%	0.05%	5.19%
Dental Hygienists	46192	708	566	37	0	68	0	37	45484	43559	662	37	486	23	717
	100.00%	1.53%	1.23%	0.08%	0.00%	0.15%	0.00%	0.08%	98.47%	94.30%	1.43%	0.08%	1.05%	0.05%	1.55%
Dental Laboratory/Medical Appliance Technicians	48748	33008	26519	1801	110	1726	32	2818	15740	13160	984	107	557	18	944
	100.00%	67.71%	54.40%	3.69%	0.23%	3.54%	0.07%	5.78%	32.29%	26.98%	1.98%	0.22%	1.14%	0.04%	1.94%
Health Aides, ex. nursing	292049	45375	29882	9920	417	1386	47	3723	246674	185389	42382	1501	3445	203	13754
	100.00%	15.54%	10.23%	3.40%	0.14%	0.47%	0.02%	1.27%	84.46%	63.48%	14.51%	0.51%	1.18%	0.07%	4.71%
Health Record Technologists/Technicians	15147	1314	945	196	8	67	12	86	13833	11477	1282	168	374	16	516
	100.00%	8.67%	6.24%	1.29%	0.05%	0.44%	0.08%	0.57%	91.33%	75.77%	8.46%	1.11%	2.47%	0.11%	3.41%
Health Technologists/ Technicians, Misc.	152539	55858	44338	6244	373	1928	120	2855	96681	78283	13930	521	2039	118	3784
	100.00%	36.62%	29.07%	4.09%	0.24%	1.26%	0.08%	1.87%	63.38%	50.01%	9.13%	0.34%	1.34%	0.08%	2.48%
Medical Diagnostic Technicians	492832	145389	111178	17116	791	7207	262	8835	347443	282762	39031	1342	12120	315	11873
	100.00%	29.50%	22.56%	3.47%	0.16%	1.46%	0.05%	1.79%	70.50%	57.37%	7.92%	0.27%	2.46%	0.06%	2.41%
Clinical Laboratory Technologists/Technicians	243982	62175	45783	8008	258	4084	123	3919	181807	145431	20068	604	9414	117	6173
	100.00%	25.48%	18.76%	3.28%	0.11%	1.67%	0.05%	1.61%	74.52%	59.61%	8.23%	0.25%	3.86%	0.05%	2.53%
Nursing Aides Orderlies/Attendants	1378118	168361	103172	49467	1358	2935	281	11148	1209757	798834	322742	10332	16757	1460	60432
	100.00%	12.22%	7.49%	3.59%	0.10%	0.21%	0.02%	0.81%	87.78%	57.91%	23.42%	0.75%	1.22%	0.11%	4.39%
Physicians' Assistants	30437	18211	15318	1401	132	284	21	1045	12226	9491	1606	79	338	8	708
	100.00%	59.83%	50.33%	4.60%	0.43%	0.97%	0.07%	3.43%	40.17%	31.18%	5.28%	0.26%	1.11%	0.02%	2.32%
Radiologic Technicians	96311	27356	21057	2864	160	1195	19	2061	68955	51042	5033	217	667	80	1916
	100.00%	28.40%	21.86%	2.97%	0.17%	1.24%	0.02%	2.14%	71.60%	53.38%	5.23%	0.23%	0.69%	0.08%	1.99%
Therapists															
Inhalation	48738	21179	16916	2124	90	519	6	1524	27559	22919	2982	118	451	27	1062
	100.00%	43.45%	34.71%	4.36%	0.18%	1.06%	0.01%	3.13%	56.55%	47.02%	6.12%	0.24%	0.93%	0.06%	2.18%
Occupational	17756	1499	1183	200	14	44	0	58	15257	14975	574	36	384	16	272
	100.00%	8.44%	6.66%	1.13%	0.08%	0.25%	0.00%	0.33%	91.56%	84.34%	3.23%	0.20%	2.16%	0.09%	1.53%
Physical	43075	11234	9552	993	33	244	8	404	31841	28245	1937	78	881	28	872
	100.00%	26.08%	22.18%	2.31%	0.08%	0.57%	0.02%	0.94%	73.92%	65.57%	4.50%	0.18%	1.58%	0.07%	2.02%
Speech	41296	4485	4152	178	22	25	0	110	36811	33908	1863	54	357	28	601
	100.00%	10.86%	10.05%	0.43%	0.05%	0.06%	0.00%	0.27%	89.14%	82.11%	4.51%	0.13%	0.86%	0.07%	1.46%
Therapists, Misc.	43068	13784	10687	2139	109	219	29	601	29284	24967	2962	127	404	32	792
	100.00%	32.01%	24.81%	4.97%	0.25%	0.51%	0.07%	1.40%	67.99%	57.97%	6.88%	0.29%	0.94%	0.07%	1.84%

FIELD: Medicine

SOURCE: Women in Engineering, Medicine and Science, by Vera Kistiakowsky, The Conference on Women in Science and Engineering, National Research Council, June 11-12, 1973; and Journal of the American Medical Association, Vol. 234, No. 13, December 1975; Vol. 243, No. 9, March 1980; and Vol. 246, No. 25, December 1981; Vol. 248, No. 24, December 24-31, 1982, and Vol. 250, No. 12, September 23-30, 1983, copyright by AMA; unpublished data for 1983-84

TABLE 8-17

ENROLLMENTS AND GRADUATES IN UNITED STATES MEDICAL SCHOOLS FOR SELECTED YEARS, BY SEX

YEAR	No. of U.S. Med. Schools	Total Enroll-ment	Women Students		Total M.D. Grads.	Women Graduates	
			No.	% of Total		No.	% of Total
1914-15	96	14,891	592	4.0	3,536	92	2.6
1924-25	80	18,200	910	5.0	3,974	204	5.1
1934-35	77	22,888	1,077	4.7	5,101	207	4.1
1954-55	81	28,583	1,537	5.4	6,977	345	4.9
1964-65	88	32,428	2,503	7.7	7,409	503	6.8
1974-75	114	53,554	9,661	18.0	12,714	1,706	13.4
1979-80	126	63,800	16,315	25.4	15,135	3,497	23.1
1980-81	126	65,497	17,373	26.5	15,667	3,892	24.8
1981-82	126	66,485	18,555	27.9	15,985	3,991	25.0
1982-83	127	66,886	19,627	29.3	15,728	4,193	26.7
1983-84		69,827	20,635	30.6			

SOURCE: Journal of the American Medical Association, Vol. 238, No. 26, December 26, 1977; Vol. 243, No. 9, March 1980; Vol. 246, No. 25, December 25, 1981; Vol. 248, No. 24, December 24-31, 1982; "Medical School Enrollments, 1973-74 thru 1977-78"; "Undergraduate Medical Education," Vol. 250, No. 12, September 23-30, 1983; Journal of Medical Education, Vol. 53, April 1978; and personal communications with the Association of American Medical Colleges

TABLE 8-18

APPLICANTS, FIRST YEAR, AND TOTAL ENROLLMENTS AND GRADUATES IN UNITED STATES MEDICAL SCHOOLS BY SEX, 1968-69 - 1983-84

YEAR	APPLICANTS			FIRST YR. ENROLL.			TOTAL ENROLL.			GRADUATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69	21,118	2,097	9.9	9,863	887	9.0	35,833	3,136	8.8	8,059	607	7.5
1969-70	24,465	2,289	9.4	10,401	952	9.2	37,669	3,390	9.0	8,367	700	8.4
1970-71	24,987	2,734	10.9	11,348	1,256	11.1	40,487	3,894	9.6	8,974	827	9.2
1971-72	29,172	3,737	12.8	12,361	1,693	13.7	43,650	4,755	10.9	9,551	860	9.0
1972-73	36,135	5,480	15.2	13,726	2,315	16.9	47,546	6,099	12.8	10,391	924	8.9
1973-74	40,506	7,202	17.8	14,185	2,743	19.6	50,886	7,731	15.4	11,613	1,264	11.1
1974-75	42,624	8,712	20.4	14,963	3,260	22.3	54,074	9,786	18.1	12,714	1,706	13.4
1975-76	42,303	9,575	22.6	15,351	3,656	23.8	56,244	11,527	20.5	13,561	2,200	16.2
1976-77	42,155	10,244	24.3	15,667	3,876	24.7	58,266	13,059	22.4	13,607	2,611	19.2
1977-78	40,569	10,195	25.1	16,136	4,130	25.6	60,039	14,218	23.7	14,393	3,086	21.4
1978-79	36,636	9,561	26.1	16,620	4,184	25.2	62,213	15,293	24.4	14,966	3,445	23.0
1979-80	36,141	10,222	28.3	16,886	4,748	27.9	63,800	16,315	25.4	15,135	3,497	23.1
1980-81	36,100	10,644	29.5	17,204	4,970	28.9	65,497	17,373	26.5	15,667	3,892	24.8
1981-82	36,727	11,673	31.8	17,320	5,343	30.8	66,485	18,555	27.9	15,985	3,991	25.0
1982-83	35,730	11,685	32.7	17,230	5,445	31.6	66,886	19,627	29.3	15,728	4,193	26.7
1983-84				17,150	5,653	33.0	67,327	20,635	30.6			

FIELD: Medicine

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, October, 1978; "Medical Student Enrollment, 1971-72 through 1975-76", Journal of Medical Education, Vol. 51, February 1976; Vol. 52, February 1977, Vol. 53, April 1978; Vol. 54, December 1978, unpublished data 1979 and 1980 from the Association of American Medical Colleges; Journal of the American Medical Association, Vol. 246, No. 25, December 25, 1981; Vol. 248, No. 24, December 24-31, 1982; and Vol. 250, No. 12, September 23, 1983, AMA.

TABLE 8-19

FIRST-YEAR ENROLLMENTS IN U.S. SCHOOLS OF MEDICINE BY RACIAL/ETHNIC CATEGORY, 1968-69 THRU 1982-83

YEAR	Total First-Year Enrollment	Total U.S. Minority*		RACIAL/ETHNIC CATEGORY									
				Black American		American Indian†		Mexican Am./Chicano		Mainland Puerto Rican		Asian/ Pac. Islander	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1968-69	9,863	413	4.2	266	2.7	3	*	20	0.2	3	*	121	1.2
1969-70	10,422	641	6.2	440	4.2	7	0.1	44	0.4	10	0.1	140	1.3
1970-71	11,348	998	8.8	697	6.1	11	0.1	73	0.6	27	0.2	190	1.7
1971-72	12,361	1,280	10.4	882	7.1	23	0.2	118	1.0	40	0.3	217	1.8
1972-73	13,677	1,437	10.5	957	7.0	34	0.2	137	1.0	44	0.3	231	1.7
1973-74	14,159	1,631	11.5	1,027	7.2	44	0.3	174	1.2	56	0.4	259	1.8
1974-75	14,763	1,839	12.5	1,106	7.5	71	0.5	227	1.5	69	0.5	275	1.9
1975-76	15,295	1,787	11.7	1,036	6.8	60	0.4	224	1.5	71	0.5	282	1.8
1976-77	15,613	1,891	12.1	1,040	6.7	43	0.3	245	1.6	72	0.5	348	2.2
1977-78	16,136	2,146	13.3	1,085	6.7	51	0.3	246	1.5	68	0.4	395	2.4
1978-79	16,501	2,225	13.4	1,061	6.4	47	0.3	260	1.6	75	0.5	452	2.7
1979-80	16,930	2,463	14.5	1,108	6.5	63	0.4	290	1.7	86	0.5	502	3.0
1980-81	17,204	2,290	14.1	932	5.7	59	0.4	201	1.3	285	1.8	572	3.5
1981-82	17,320	2,522	15.4	973	5.9	67	0.4	262	1.6	332	2.0	674	4.1
1982-83	17,230	2,634	16.1	912	5.6	55	0.3	282	1.6	313	1.9	843	5.1

*Includes students from other minority groups, not shown separately.

†Includes "Alaska Native" category since 1977-78.

*Less than 0.05 percent.

TABLE 8-20

TOTAL ENROLLMENTS IN U.S. SCHOOLS OF MEDICINE BY RACIAL/ETHNIC CATEGORY, 1968-69 THRU 1982-83

YEAR	Total Enrollment	Total U.S. Minority*		RACIAL/ETHNIC CATEGORY									
				Black American		American Indian†		Mexican Am./Chicano		Mainland Puerto Rican		Asian/ Pac. Islander	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1968-69	35,833	1,275	3.6	783	2.2	9	*	59	0.2	3	*	421	1.2
1969-70	37,690	1,630	4.3	1,042	2.8	18	*	92	0.2	26	0.1	452	1.2
1970-71	40,238	2,294	5.7	1,509	3.8	18	*	148	0.4	48	0.1	571	1.4
1971-72	43,650	3,072	7.0	2,055	4.7	42	0.1	252	0.6	76	0.2	647	1.5
1972-73	47,366	3,918	8.3	2,582	5.5	69	0.1	361	0.8	90	0.2	718	1.5
1973-74	50,716	4,840	9.5	3,049	6.0	97	0.2	496	1.0	123	0.2	883	1.7
1974-75	53,594	5,560	10.4	3,355	6.3	159	0.3	638	1.2	172	0.3	959	1.8
1975-76	55,818	5,928	10.6	3,456	6.2	172	0.3	699	1.3	197	0.4	1,022	1.8
1976-77	57,765	6,319	10.9	3,517	6.1	186	0.3	780	1.4	232	0.4	1,177	2.0
1977-78	60,039	7,260	12.1	3,587	6.0	201	0.3	831	1.4	261	0.4	1,422	2.4
1978-79	62,213	7,596	12.2	3,537	5.7	202	0.3	882	1.4	277	0.4	1,592	2.6
1979-80	63,800	8,130	12.8	3,627	5.7	212	0.3	961	1.5	283	0.4	1,777	2.8
1980-81	65,497	8,569	13.3	3,719	5.8	226	0.3	957	1.5	329	0.5	1,953	3.0
1981-82	66,485	9,303	14.0	3,791	5.8	234	0.4	1,002	1.5	1,193	1.8	2,281	3.5
1982-83	66,886	9,854	15.0	3,729	5.7	233	0.3	1,034	1.6	1,273	1.9	2,672	4.1

*Includes students from other minority groups, not shown separately.

†Includes "Alaska Native" category since 1977-78.

*Less than 0.05 percent.

SOURCE: Journal of the American Medical Association, Vol. 234, No. 13, Dec. 29, 1975; Vol. 238, No. 26, Dec. 26, 1977; Vol. 240, No. 26, Dec. 22, 1978; Vol. 243, No. 9, March 1980; Vol. 246, No. 25, Dec. 25, 1981; Vol. 248, No. 24, Dec. 24, 1982; Vol. 250, No. 12, September 23, 1983. Copyright by A.M.A.

TABLE 8-21

STUDENTS REPEATING THE ACADEMIC YEAR BY RACIAL/ETHNIC GROUP

	1974-75 Enrolled		1976-77 Enrolled		1978-79 Enrolled		1980-81 Enrolled		1982-83 Enrolled	
	Total	Repeat.	Total	Repeat.	Total	Repeat.	Total	Repeat.	Total	Repeat.
FIRST YEAR CLASS										
Black	1,117	161	1,051	116	1,077	155	1,127	195	1,083	171
Mexican American	231	32	263	24	260	24	259	30	293	31
Puerto Rican	71	7	83	7	262	12	306	21	343	30
Other Hispanic					149	8	222	9	265	14
American Indian	72	2	46	5	47	4	69	10	62	7
Asian/Pacific Isl.					483	13	583	11	859	16
All Other Stuvents	13,472	162	14,091	174	14,342	241	14,638	288	14,323	297
ALL OTHER CLASSES										
Black	2,279	136	2,519	193	2,533	168	2,592	149	2,646	153
Mexican American	407	33	555	39	640	31	698	24	741	34
Puerto Rican	97	7	179	7	642	20	744	15	930	33
Other Hispanic					336	7	442	6	650	14
American Indian	89	7	145	11	148	6	197	7	171	5
Asian/Pacific Isl.					1,191	29	1,370	20	1,813	31
All Other Students	36,239	229	38,867	303	40,644	315	42,290	313	42,705	263

TABLE 8-22

MINORITY GRADUATES IN MEDICINE, SELECTED YEARS, 1969-70 - 1982-83

YEAR	Total No.	Black		Am. Indian/ Alaskan Nat.		Mexican American		Puerto Rican		Asian/ Pacific Isl.	
		No.	%	No.	%	No.	%	No.	%	No.	%
1969-70	8,367	165	2.0	4	0.05	10	0.1	9	0.1		
1972-73	10,391	341	3.3	8	0.08	39	0.4	10	0.1		
1974-75	12,714	638	5.0	22	0.2	110	0.9	28	0.2		
1976-77	13,607	752	5.5	29	0.2	144	1.1	38	0.3		
1977-78	14,393	793	5.5	47	0.3	172	1.2	176	1.2	319	2.2
1978-79	14,966	774	5.2	49	0.3	194	1.3	190	1.3	350	2.4
1980-81	15,667	773	4.9	43	0.3	201	1.3	223	1.4	414	2.7
1981-82	15,985	763	5.0	45	0.3	225	1.4	222	1.4	459	2.9
1982-83	15,728	813	5.2	44	0.3	214	1.4	289	1.8	483	3.1

SOURCE: Minorities and Women in the Health Fields, 1984 Edition, U.S. Department of Health and Human Services, Public Health Service, Bureau of Health Professions, Division of Disadvantaged Assistance. In Manuscript; Unpublished data for 1983-84.

TABLE 8-23

COMPARISON OF MINORITY WOMEN FIRST-YEAR AND TOTAL ENROLLMENT IN SCHOOLS OF MEDICINE IN THE UNITED STATES: ACADEMIC YEARS 1971-72, 1977-78, AND 1983-84

CATEGORY	1971-1972			1977-1978			1983-1984		
	Men & Women in Category	WOMEN		Men & Women in Category	WOMEN		Men & Women in Category	WOMEN	
		No.	%		No.	%		No.	%
FIRST-YEAR ENROLLMENT									
Total First-Year Enrollment	12,361	1,693	13.7	16,136	4,130	25.6	17,150	5,653	33.0
First-Year Minority Enrollment	1,280	266	20.8	2,002	705	35.2	2,889	1,141	39.5
Black	882	200	22.7	1,085	443	40.8	1,173	544	46.4
Mexican American	118	10	8.5	246	66	26.8	301	102	33.9
Mainland Puerto Rican	40	6	15.0	68	23	33.8	109	44	40.4
Other Hispanic	*	*	*	157	43	27.4	248	76	30.6
American Indian	23	8	34.8	51	15	29.4	75	38	50.7
Asian	217	42	19.4	395	115	29.1	983	337	34.3
TOTAL ENROLLMENT									
Total Enrollment	43,650	4,755	10.9	60,039	14,218	23.7	67,327	20,635	30.6
Total Minority Enrollment	3,072	583	19.0	6,728	2,220	33.0	9,873	3,724	37.7
Black	2,055	420	20.4	3,587	1,371	38.2	3,892	1,748	44.9
Mexican American	252	24	9.5	831	189	22.7	1,082	352	32.5
Mainland Puerto Rican	76	13	17.1	261	89	34.1	368	143	38.9
Other Hispanic	*	*	*	426	99	23.2	983	285	29.0
American Indian	42	10	23.8	201	55	27.4	258	95	36.8
Asian	647	116	17.9	1,422	417	29.3	3,290	1,101	33.5

* "Other Hispanic" category not used in 1971-72.

FIELD: Medicine

SOURCE: Minorities and Women in the Health Fields, 1984 Edition, U.S. Department of Health & Human Services, Public Health Service, Bureau of Health Professions; Division of Disadvantaged Assistance. In Manuscript.

TABLE 8-24

ACTIVE FEDERAL AND NON-FEDERAL WOMEN PHYSICIANS IN THE UNITED STATES, BY SPECIALTY: SELECTED YEARS 1963 THROUGH 1981

SPECIALTY	1963		1970		1976		1980		1981	
	No.	%	No.	%	No.	%	No.	%	No	%
All Active Women Physicians[1]	14,957	5.7	21,318	6.9	28,966	8.3	44,706	10.8	50,894	11.8
General Practice	3,103	4.2	2,486	4.3	3,164	5.7	4,677	7.8	5,423	8.9
Medical Specialties, Total	4,560	8.1	7,101	9.2	10,884	11.0	17,872	14.2	20,269	15.4
Allergy	71	8.5	117	6.8	127	7.5	116	7.6	120	7.9
Cardiovascular Diseases	48	2.8	187	2.9	182	2.7	327	3.3	364	3.5
Dermatology	194	5.9	278	6.9	401	8.3	628	11.1	726	12.5
Gastroenterology	8	1.4	46	2.3	46	1.9	118	2.9	140	3.1
Internal Medicine	1,513	4.4	2,383	5.7	4,482	7.7	8,130	11.4	9,456	12.6
Pediatrics[2]	2,606	18.3	3,907	20.8	5,486	23.3	8,314	28.2	9,217	30.0
Pulmonary Diseases	121	9.8	183	7.9	160	7.1	239	6.4	246	6.2
Surgical Specialties, Total	1,482	2.1	2,129	2.5	3,362	3.4	5,561	5.0	6,399	5.6
General Surgery	187	0.7	311	1.0	757	2.3	1,150	3.4	1,336	3.9
Obstetrics/Gynecology	913	5.8	1,337	7.1	1,897	8.5	3,243	12.3	3,717	13.7
Ophthalmology	239	3.0	307	3.1	436	3.8	657	5.1	751	5.7
Orthopedic Surgery	39	0.6	46	0.5	69	0.6	144	1.0	177	1.2
Otolaryngology	55	1.1	52	1.0	80	1.4	141	2.2	161	2.5
Plastic Surgery	28	2.8	40	2.5	68	2.9	120	4.0	132	4.1
Other[3]	21	0.2	36	0.3	55	0.4	106	0.8	125	0.8
Other Specialties, Total	5,812	9.5	9,602	10.7	11,556	12.2	16,596	14.0	18,803	15.1
Anesthesiology	1,017	13.3	1,516	14.0	1,836	13.9	2,388	15.0	2,650	15.7
General Preventive Medicine	117	14.1	100	12.4	106	13.1	109	13.5	137	16.9
Neurology	109	6.0	215	7.0	382	8.6	580	10.2	648	10.4
Occupational Medicine	64	3.5	86	3.2	80	3.4	118	5.0	170	6.5
Pathology[4]	683	9.3	1,282	12.2	1,748	14.4	2,241	16.4	2,551	18.1
Physical Medicine/Rehabilitation	115	12.3	241	16.3	330	19.2	515	24.0	623	26.5
Psychiatry[5]	1,939	11.7	2,942	12.7	4,042	14.9	5,257	17.1	5,910	18.6
Public Health	289	16.3	564	18.6	535	20.6	470	20.3	442	20.9
Radiology[6]	329	3.8	673	5.0	1,095	6.5	1,742	8.6	1,969	9.3
Other and Unspecified	1,150	8.4	1,983	9.6	1,402	10.1	3,176	13.0	3,703	14.1

1 Excludes inactive women physicians. Also excludes women physicians not classified as to status or activity and with address unknown.
2 Includes pediatric allergy and pediatric cardiology.
3 Consists of neurological, colon and rectal, thoacic, and urological surgery.
4 Includes forensic pathology.
5 Includes child psychiatry.
6 Includes both diagnostic and therapeutic radiology.

FIELD: Medicine

SOURCE: Minorities and Women in the Health Fields, 1984 Edition, U.S. Department of Health and Human Services, Public Health Service, Bureau of Health Professions, Division of Disadvantaged Assistance. In Manuscript.

TABLE 8-25

ACTIVE FEDERAL AND NON-FEDERAL WOMEN PHYSICIANS IN THE UNITED STATES AND POSSESSIONS, BY MAJOR PROFESSIONAL ACTIVITY AND SPECIALTY GROUP: DECEMBER 31, 1981

MAJOR PROFESSIONAL ACTIVTY	SPECIALTY GROUP									
	TOTAL		GENERAL PRACTICE		MEDICAL SPECIALTIES		SURGICAL SPECIALTIES		OTHER SPECIALTIES	
	No.	%	No.	%	No.	%	No.	%	No.	%
All Active Women Physicians*	50,894	11.8	5,423	8.9	20,269	15.4	6,399	5.6	18,803	15.1
Patient Care	45,456	11.7	5,248	8.9	17,583	15.4	6,141	5.6	16,484	15.4
Office-based Practice	24,393	8.5	3,607	7.2	9,352	11.4	3,184	3.7	8,250	11.8
Hospital-based Practice										
Residents, all years	14,853	25.4	1,093	20.6	6,077	28.4	2,574	14.6	5,109	26.9
Full-time physican staff	6,210	16.3	548	15.1	2,154	20.7	383	6.7	3,125	17.2
Other non-Patient Care Professional Activities:										
Medical Teaching	1,043	14.5	58	12.0	489	16.3	65	5.7	431	16.7
Administration	1,340	10.1	76	8.7	398	11.3	48	3.7	818	10.8
Research	2,563	14.3	15	11.0	1,688	15.2	132	8.2	728	14.5
Other	492	16.3	26	13.0	111	20.6	13	4.9	342	16.9

* Excludes 4,473 inactive women physicians. Also excludes 2,542 women physicians not classified as to status or activity, 1,437 with address unknown, and 643 who are in temporary foreign locations.

SOURCE: American Medical Association. Theodore, C.N., and Haug, J.N. Selected Characteristics of the Physicians Population, 1968. American Medical Association, Center for Health Services Reseach and Development. Physician Characteristics and Distribution in the U.S., 1982. Also prior issues (formerly titled Physician Distribution and Medical Licensure in the U.S.).

TABLE 8-26

ACTIVE FEDERAL AND NON-FEDERAL WOMEN PHYSICIANS IN THE UNITED STATES, BY MAJOR PROFESSIONAL ACTIVITY: SELECTED YEARS 1963 THROUGH 1981

MAJOR PROFESSIONAL ACTIVITY	NUMBER OF ACTIVE WOMEN PHYSICIANS													
	1963	%	1967	%	1970	%	1973	%	1976	%	1980	%	1981	%
All Active Women Physicians[1]	14,957	5.7	19,044	6.5	21,318	6.9	24,354	7.5	28,966	8.3	44,706	10.8	50,894	11.8
Patient Care	13,621	5.5	17,223	6.3	18,362	6.6	21,544	7.3	25,896	8.1	39,969	10.6	45,456	11.7
Office-Based Practice	8,568	4.8	9,338	4.9	9,217	4.8	10,798	5.4	12,581	5.8	20,609	7.6	24,393	8.5
Hospital-Based Practice														
Residents, All Years	3,085	8.0	4,892	10.4	5,464	10.7	6,830	11.7	6,848	14.0	13,322	21.5	14,853	23.4
Full-Time Physician Staff	1,968	6.8	2,993	8.0	3,681	10.6	3,916	11.0	4,467	11.5	6,038	14.2	6,210	16.3
Other Non-Patient Care														
Professional Activities:														
Medical Teaching	786	9.6	1,042	9.3	611	10.9	761	12.3	844	12.2	1,090	13.7	1,043	14.5
Administration	226	6.8	276	6.7	915	7.5	999	8.4	1,077	9.2	1,178	9.6	1,340	10.1
Research	324	10.1	503	10.9	1,146	9.6	742	8.9	816	9.6	2,077	13.5	2,563	14.3
Other					284	10.8	308	11.7	333	11.5	392	13.6	492	16.3

[1] Excludes not only inactive women physicians but also excludes women physicians not classified as to status or activity and with address unknown.

FIELD: Medicine

SOURCE: Journal of the American Medical Association, Vol. 246, No. 25, 25 December 1981, Copyright 1981 by the AMA

TABLE 8-27

PHYSICIANS SERVING IN RESIDENCIES BY SPECIALTY AND SEX, 1978, 1979, 1980

SPECIALTY	1978			1979			1980		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
Allergy & Immunology	120	24	20.0	155	24	15.5	192	31	16.1
Anaesthesiology	2,378	456	19.2	2,491	494	19.8	2,490	600	24.1
Colon & Rectal Surgery	39	1	2.6	42	1	2.4	37	1	2.7
Dermatology	800	144	18.0	801	163	20.3	755	202	26.8
Dermatopathology	17	2	11.8	19	0	0.0	30	5	16.7
Family Practice	6,000	932	15.5	6,352	1,095	17.2	6,344	1,235	19.5
Internal Medicine	16,178	2,660	16.4	16,580	2,879	17.4	15,964	3,342	20.9
Neurological Surgery	560	16	2.9	579	23	4.0	511	24	4.7
Neurology	1,194	174	14.6	1,212	167	13.8	1,114	191	17.1
Nuclear Medicine	157	27	17.2	174	27	15.5	176	26	14.8
Obstetrics-Gynecology	4,448	1,038	23.3	4,496	1,144	25.4	4,221	1,279	30.3
Ophthamology	1,561	200	12.8	1,538	185	12.0	1,480	185	12.5
Orthopedic Surgery	2,482	70	2.8	2,572	72	2.8	2,418	89	3.7
Otolaryngology	951	56	5.9	1,038	68	6.6	923	80	8.7
Pathology	2,564	825	32.2	2,519	749	29.7	2,186	691	31.6
Blood Banking	17	8	47.1	21	6	28.6	23	9	39.1
Forensic Pathology	24	3	12.5	24	6	25.0	22	3	13.6
Neuropathology	39	7	17.9	52	12	23.1	52	11	21.2
Pediatrics	5,331	2,206	41.4	5,603	2,324	41.5	5,171	2,432	47.0
Pediatric Allergy	56	10	17.9	53	12	22.6	2	1	50.0
Pediatric Cardiology	117	31	26.5	128	27	21.1	130	21	16.2
Physical Med. & Rehabilitation	436	167	38.3	490	199	40.6	492	209	42.5
Plastic Surgery	406	21	5.2	412	30	7.3	367	33	9.0
Preventive Medicine, General	166	36	21.7	199	29	14.6	157	31	19.7
Aerospace Medicine	16	0	0.0	25	1	4.0	25	1	4.0
Occupational Medicine	55	16	29.1	70	12	17.1	71	16	22.5
Public Health	26	6	23.1	23	6	26.1	31	11	35.5
Psychiatry	4,056	1,282	31.6	3,901	1,231	31.6	3,911	1,416	36.2
Child Psychiatry	552	198	35.9	521	189	36.3	426	185	43.4
Radiology, Diagnostic	2,802	424	15.1	3,024	477	15.8	2,766	531	19.2
Radiology, Diagnostic (Nuclear)	56	10	17.9	45	6	13.3	48	12	25.0
Radiology, Therapeutic	385	115	29.9	377	92	24.4	288	78	27.1
Surgery	7,792	647	8.3	7,689	650	8.5	7,794	723	9.3
Pediatric Surgery	24	1	4.2	37	5	13.5	29	5	17.2
Thoracic Surgery	294	6	2.0	276	6	2.2	256	8	3.1
Urology	1,064	20	1.9	1,077	20	1.9	917	21	2.3
TOTAL	63,163	11,839	18.7	64,615	12,431	19.2	61,819	13,738	22.2

FIELD: Medicine

SOURCE: Journal of the American Medical Association, Vol. 226, No. 8, 1973; Vol. 234, No. 13, December 29, 1975; Vol. 238, No. 26, December 26, 1977; Vol. 240, No. 26, December 20, 1978; Vol. 243, No. 9, Mar. 7, 1980, copyright by American Medical Association

TABLE 8-28

BLACK U.S. CITIZENS SERVING IN RESIDENCIES BY SPECIALTY AS OF SEPTEMBER 1, SELECTED YEARS, 1972 - 1980

SPECIALTY	U.S. & Canadian Graduates				Foreign Med. Sch. Graduates				Total Graduates		
	1972	1974	1976	1977	1972	1974	1976	1977	1978	1979	1980
Allergy and Immunology				1			1		4	4	4
Anesthesiology	13	10	21	20	37	15	21	20	65	79	97
Child Psychiatry	5	8	5		3	2	3		19	20	12
Diagnostic Radiology	1	1	6				1		88	62	92
Dermatology	12	13	14	6	3		1		24	30	45
Family Practice	12	45	122	133	4	5	9	10	336		
General Practice	2	1			8	1	23				
General Surgery	92	120	180	161	35	27	16	23	385	342	333
Internal Medicine	115	185	368	345	41	70	39	34	631	772	752
Neurological Surgery	10	8	16	20	4	1		5	32	26	39
Neurology	4	9	11		5	13	10		21	21	27
Nuclear Medicine			2	1		1	2	2	8	6	6
Obstetrics/Gynecology	101	127	230	228	25	27	5	14	390	363	385
Ophthalmology	29	28	57	43	4	4	2		66	54	48
Orthopedic Surgery	41	41	45	36	4	3	8	12	88	81	94
Otolaryngology	7	13	24	20		4	1	6	44	44	38
Pathology	18	16	28	23	18	18	12	16	56	95	74
Pediatrics	36	62	145	123	32	27	26	28	274	386	341
Pediatric Allergy		1			6	1	3		3	3	0
Physical Medicine & Rehabilitation	2	3	1	4	9	1	8	7	7	14	13
Plastic Surgery	1	2		4	1	1	2	3	10	13	11
Colon and Rectal Surgery					1		2		2	0	2
Psychiatry	52	56	94	93	8	32	32	61	169	161	197
Radiology	45	25	38	30	10	8	9	12		0	0
Surgery									385	342	333
Therapeutic Radiology	2	2	3			8	5		12	9	4
Thoracic Surgery	7	4	3	4	5	11	3	7	13	10	10
Urology	14	19	12	17	4	2	9	7	43	42	60
Other Specialties	20	22	22	18	13	9	1	31	18	24	36
TOTAL	641	821	1,447	1,330	280	293	254	298	2,793	2,944	3,000

FIELD: Osteopathy

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, May 1974, and Women in Health Careers, by Maryland Pennell, Shirlene Showell, American Public Health Association, DHEW No. (HRA) 75-55, June 1975, p. 74, and American Association of Colleges of Osteopathic Medicine, Annual Statistical Report 1981, 1982, 1983 and 1984.

TABLE 8-29

FIRST YEAR & TOTAL ENROLLMENTS AND GRADUATES IN SCHOOLS OF OSTEOPATHIC MEDICINE IN THE U.S., BY SEX, 1968-69 THRU 1982-83

YEAR	1st Yr. Enrollment			Total Enrollment			Graduates		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69	521	21	4.0	1,879	53	2.8	427	8	1.9
1969-70	577	14	2.4	1,997	59	3.0	432	12	2.8
1970-71	623	17	2.7	2,151	61	2.8	472	11	2.3
1971-72	670	29	4.3	2,304	79	3.4	485	18	3.7
1972-73	810	56	6.9	2,579	116	4.5	649	18	2.8
1973-74	884	83	9.3	2,780	181	6.5	594	17	2.9
1974-75	974	106	10.9	3,139	267	8.5	702	44	6.3
1975-76	1,038	140	13.5	3,443	362	10.5	809	58	7.2
1976-77	1,088	179	16.5	3,671	472	12.9	908	84	9.3
1977-78	1,163	192	16.5	3,926	570	14.8	971	68	7.0
1978-79	1,322	222	16.8	4,221	688	16.3	1,004	163	16.2
1979-80	1,426	265	18.6	4,571	789	17.3	1,059	192	18.1
1980-81	1,496	329	22.0	4,940	971	19.7	1,151	202	17.6
1981-82	1,582	378	23.9	5,304	1,108	20.9	1,017	186	18.3
1982-83	1,682	428	25.4	5,822	1,317	22.6	1,317	261	19.8

TABLE 8-30

FIRST YEAR AND TOTAL ENROLLMENTS IN U.S. OSTEOPATHIC COLLEGES BY MINORITY GROUP, 1978-79 - 1982-83

MINORITY GROUP	1978-79		1979-80		1980-81		1981-82		1982-83	
	No.	%	No.	%	No.	%	No.	%	No.	%
First Year Enrollment	**1,322**	**100.0**	**1,426**	**100.0**	**1,496**	**100.0**	**1,582**	**100.0**	**1,682**	**100.0**
Black American	31	2.4	40	2.8	43	2.9	37	2.3	38	2.3
American Indian	10	0.7	6	0.4	8	0.5	12	0.8	10	0.6
Hispanic	17	1.3	18	1.3	18	1.2	22	1.4	33	2.0
Asian Am./Pacific Isl.	16	1.2	30	2.1	30	2.0	33	2.1	46	2.7
First Year Minority Total	**74**	**5.7**	**93**	**6.5**	**99**	**6.6**	**104**	**6.6**	**127**	**7.6**
Total Enrollment	**4,221**	**100.0**	**4,571**	**100.0**	**4,940**	**100.0**	**5,304**	**100.0**	**5,822**	**100.**
Black American	46	2.2	100	2.2	94	1.9	104	2.0	116	2.0
American Indian	24	0.6	26	0.6	19	0.4	26	0.5	25	0.4
Hispanic	11	0.8	45	1.0	52	1.1	62	1.2	81	1.4
Oriental American	45	1.0	70	1.5	87	1.8	109	2.1	133	2.3
Total Minority Enrollment	**192**	**4.5**	**241**	**5.3**	**252**	**5.1**	**301**	**5.7**	**355**	**6.1**

FIELD: Dentistry

SOURCE: Women's Participation in First-Professional Degree Programs in Medicine, Dentistry, Veterinary Medicine, and Law, 1969-70 through 1974-75, NCES 76-023; Annual Report Dental Education Series, 1975-76 through 1981-82, American Dental Association; and Personal Communication with the American Association of Dental Schools, January 8, 1982, April 11, 1983; and June 26, 1984

TABLE 8-31

APPLICATIONS, ENROLLMENTS, GRADUATES, U.S. DENTAL SCHOOLS, BY SEX, 1968-69 - 1983-84

YEAR	APPLICANTS			FIRST-YEAR ENROLLMENT			TOTAL ENROLLMENT			GRADUATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69				4,203	38	0.9	15,408	167	1.1		36	1.1
1969-70	10,325	120	1.2	4,354	69	1.6	16,136	227	1.4	3,748	36	1.0
1970-71	10,410	160	1.5	4,639	103	2.2	16,510	274	1.7	3,777	46	1.2
1971-72	11,102	302	2.7	5,103	160	3.1	17,433	355	2.0	3,894	46	1.2
1972-73	13,478	506	3.8	6,010	241	4.0	17,774	556	3.1	4,086	58	1.4
1973-74	14,820	727	4.9	6,123	423	6.9	19,215	892	4.6	4,478	88	2.0
1974-75	14,850	1,193	8.0	5,828	638	10.9	20,163	1,403	7.0	4,513	92	2.0
1975-76	15,734	*		5,763	707	12.3	20,767	1,861	9.0	4,969	156	3.1
1976-77	14,807	*		5,935	802	13.5	21,013	2,349	11.1	5,336	248	4.6
1977-78	12,835	*		5,954	880	14.8	21,510	2,796	13.0	5,177	369	7.1
1978-79	11,753	*		6,301	1,000	15.9	22,179	3,112	14.0	5,324	634	11.9
1979-80	10,520	*		6,132	1,076	17.5	22,482	3,482	15.5	5,424	634	11.7
1980-81	9,648	1,960	20.3	6,030	1,194	19.8	22,842	3,879	17.0	5,256	715	13.6
1981-82	8,852	1,861	21.0	5,855	1,268	21.7	22,621	4,227	18.7	5,550	825	14.9
1982-83	7,724	1,722	22.3	5,498	1,223	22.2	22,235	4,457	20.0	5,371	838	15.6
1983-84	7,128	1,779	25.0	5,371	1,313	24.4	21,428	4,733	22.1	5,274	1,089	20.6

* Not available.

SOURCE: Minorities and Women in the Health Fields, U.S. Department of HEW, Public Health Service, Health Resources Administration, DHEW Pub. No. (HRA) 76-22, September 1975; Minority Report 1977-78, Supplement 3 to the Annual Report 1977-78 Dental Education, American Dental Association, February 1978; and Annual Report on Dental Education 1980-81 and 1983-84, American Dental Association.

TABLE 8-32

FIRST YEAR AND TOTAL ENROLLMENTS IN U.S. DENTAL SCHOOLS BY MINORITY GROUP, SELECTED YEARS, 1972-73 - 1983-84

MINORITY GROUP	1972-73		1977-78		1980-81		1983-84	
	No.	%	No.	%	No.	%	No.	%
FIRST YEAR ENROLLMENT	**5,287**	**100.0**	**5,954**	**100.0**	**6,030**	**100.0**	**5,274**	**100.0**
Black	266	5.0	296	5.0	283	4.7	276	5.3
American Indian	5	0.1	10	0.1			19	0.4
Hispanic	56	1.1	110	1.8	160	2.6	172	3.3
Asian	138	2.6	225	3.8	317	5.3	406	7.8
Other	10	0.2						
FIRST YEAR MINORITY TOTAL	**475**	**9.0**	**641**	**10.8**	**772**	**12.8**	**873**	**16.8**
TOTAL ENROLLMENT	**18,209**	**100.0**	**21,510**	**100.0**	**22,842**	**100.0**	**21,428**	**100.0**
Black	765	4.2	968	4.5	1,022	4.5	1,000	4.7
American Indian	14	0.1	59	0.2	53	0.2	64	0.3
Hispanic	133	0.7	390	1.8	519	2.3	603	2.9
Asian	409	2.2	743	3.4	1,040	4.5	1,357	6.4
Other	51	0.3						
TOTAL MINORITY ENROLLMENT	**1,371**	**7.5**	**2,160**	**10.1**	**2,634**	**11.5**	**3,024**	**14.3**

FIELD: Dentistry

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, May 1974; and Annual Report Dental Education Series, 1973-74 through 1983-84, American Dental Association; and Personal Communication, June 26, 1984

TABLE 8-33

GRADUATES OF SCHOOLS OF DENTISTRY IN THE UNITED STATES, BY RACIAL/ETHNIC CATEGORY, 1970-71 THROUGH 1983-84

ACADEMIC YEAR	TOTAL GRADUATES	RACIAL / ETHNIC CATEGORY													
		TOTAL MINORITY		BLACK		AMERICAN INDIAN		HISPANIC		ASIAN		OTHER MINORITY		WHITE	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1970-71	3,598 [1]	137	3.8	53	1.5	1	[4]	9	0.3	62	1.7	12	0.3	3,461	96.2
1971-72 [2]	3,689 [1]	167 [3]	4.5	74	2.0	1	[4]	12	0.3	61	1.7	19	0.5	3,522	95.5
1972-73	4,191 [1]	241	5.8	110	2.6	1	[4]	25	0.6	73	1.7	32	0.8	3,950	94.2
1973-74	4,479	335	7.5	154	3.4	2	0.4	31	0.7	113	2.5	35	0.8	4,144	92.5
1974-75	4,933	368	7.5	187	3.8	5	0.1	33	0.7	107	2.2	30	0.6	4,565	92.5
1975-76	5,282	467	8.8	213	4.0	3	0.1	50	0.9	157	3.0	44	0.8	4,815	91.2
1977-78	5,177	461	8.9	215	4.2	15	0.2	69 [5]	1.3	162	3.1			4,716	91.1
1978-79	5,368	485	9.0	182	3.4	18	0.3	77	1.4	208	3.9			4,833	91.0
1980-81	5,256	520	9.9	190	3.7	14	0.3	119	2.3	197	3.7			4,736	90.1
1981-82	5,550	564	10.2	214	3.9	14	0.3	90	1.6	246	4.4			4,986	89.8
1982-83	5,371	614	11.6	227	4.3	12	0.2	110	2.1	265	5.0			4,757	88.6
1983-84	5,274	571	10.0	200	3.5	12	0.2	144	2.5	215	3.8			4,703	89.2

[1] Excludes University of Puerto Rico and two schools which did not report racial/ethnic data on graduates in 1970-71 and 1971-72.

[2] Minority data concern only U.S. citizens; non-citizen minority graduates are included with white graduates.

[3] Includes non-citizen minority graduates from Howard University.

[4] Less than 0.05 percent.

[5] Category now called Hispanic - includes Mexican American, Spanish American and Puerto Rican.

FIELD: Dentistry

SOURCE: Supply of Dentists, Optometrists, Pharmacists and Veterinarians: 1950-2000, Bureau of Health Professions, Health Resources and Services Administration, July 1983

TABLE 8-34

NUMBER OF DENTISTS BY PRIMARY OCCUPATION AND SEX, December 31, 1982

PRIMARY OCCUPATION	TOTAL	WOMEN	% WOMEN
Practicing Dentists (more than 30 hours per week)	101,520	2,690	2.7
Practicing Dentists (less than 30 hours per week)	13,010	900	6.9
Dental School Faculty/Staff Member	3,520	260	7.4
Armed Forces Dentist	5,200	120	2.3
Dentists Employed by Fed. State & Local Governments	3,530	270	7.6
Hospital Staff Dentist	1,040	60	5.8
Intern/Resident/Student	3,760	710	18.9
Health/Dental Organization Staff Member	430	40	9.3
U.S. Total	132,010	5,050	3.8

SOURCE: Third Report to the President & Congress on the Status of Health Professions Personnel in the United States, January 1982, U.S. Department of Health and Human Services, Health Resources Administration

TABLE 8-35

NUMBER AND DISTRIBUTION OF ACTIVE DENTISTS BY SPECIALTY AND SEX, December 31, 1980

	All Dental Specialists		Male		Female		
	Number	Percent Distribution	Number	Percent Distribution	Number	Percent Distribution	% Female of Active Dental Specialists
All Specialists	**17,160**	**100.0**	**16,988**	**100.0**	**172**	**100.0**	**1.0**
Orthodontists	6,563	38.2	6,509	38.3	54	31.4	0.8
Oral Surgeons	3,960	23.1	3,954	23.3	6	3.5	0.2
Periodontists	2,242	13.1	2,212	13.0	30	17.4	1.3
Pedodontists	2,063	12.0	1,998	11.8	65	37.8	3.2
Endodontists	1,174	6.8	1,169	6.9	5	2.9	0.4
Prosthodontists	949	5.6	942	5.5	7	4.1	0.7
Public Health Dentists	110	0.6	107	0.6	3	1.7	2.7
Oral Pathologists	99	0.6	97	0.6	2	1.2	2.0

FIELD: Dentistry

SOURCE: Minorities and Women in the Health Fields, 1984 Edition, U.S. Dep't. of Health and Human Services, Public Health Services, Public Health Service, Bureau of Health Professions, Division of Disadvantaged Assistance, in Manuscript; American Dental Assn., Council on Dental Education, Dental Faculty Information; Supplement to the Annual Report on Dental Education, 1981-82; also prior supplementary report for 1976-77

TABLE 8-36

TEACHING FACULTY IN SCHOOLS OF DENTISTRY IN THE U.S. BY RACE/ETHNICITY AND SEX: 1976-77 and 1981-82

Racial/ethnic category	Both sexes	Male	Female	Percent female	Minority percent distribution (both sexes)
1976-77					
Total faculty 1/	11,467	10,520	947	8.3	100.0
Total minority faculty	829	719	110	13.3	7.2
Black	348	307	41	11.8	3.0
Hispanic	111	96	15	13.5	1.0
American Indian	2	2	-	-	2/
Asian	210	177	33	15.7	1.8
Other minority	158	137	21	13.3	1.4
1981-82					
Total faculty 1/	12,683	11,618	1,065	8.4	100.0
Total minority faculty 3/	1,023	855	168	16.4	8.1
Black	422	352	70	16.6	3.3
Hispanic	124	99	25	20.2	1.0
American Indian	5	4	1	20.0	2/
Asian	472	400	72	15.3	3.7

1/ Includes both full-time and part-time faculty for basic science and clinical subjects.

2/ Percent is less than 0.05

3/ The category "Other minority" was not in use in 1981-82.

FIELD: Veterinary Medicine

SOURCE: Women's Participation in First Professional Degree Programs in Medicine, Dentistry, Veterinary Medicine and Law, 1969-70 - 1974-75; NCES 76-023; Digest of Educational Statistics 1979; Personal Communication, American Veterinary Medicine Association, November 7, 1980, January 15, 1982, April 11, 1983, and June 19, 1984.

TABLE 8-37

ENROLLMENTS AND GRADUATES IN U.S. SCHOOLS OF VETERINARY MEDICINE BY SEX, 1968-69 - 1983-84

YEAR	FIRST YEAR ENROLLMENT			TOTAL ENROLLMENT			GRADUATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69	1,327	120	9.0	4,779	362	7.6	1,006	56	5.6
1969-70	1,386	159	11.5	4,726	417	8.8	1,206	90	7.5
1970-71	1,439	158	11.0	4,716	444	9.4	1,252	98	7.8
1971-72	1,509	228	15.1	5,163	593	11.5	1,247	117	9.4
1972-73	1,760	327	18.6	5,439	745	13.7	1,299	133	10.2
1973-74	1,520	350	23.0	5,528	957	17.3	1,384	155	11.2
1974-75	1,792	453	25.3	5,985	1,220	20.4	1,415	225	15.9
1975-76	1,807	618	34.2	6,274	1,719	27.4	1,532	277	18.1
1976-77	1,856	598	32.2	6,571	1,805	27.5	1,586	362	22.8
1977-78	1,873	706	37.7	6,903	2,129	30.8	1,635	409	25.0
1978-79	2,086	766	36.7	7,312	2,471	33.8	1,704	499	29.3
1979-80	1,747	711	40.7	7,007	2,570	36.7	1,852	615	33.2
1980-81	2,237	987	44.1	8,154	3,220	39.4	1,931	702	36.3
1981-82	2,313	1,100	47.5	8,499	3,576	42.0	1,886	668	35.4
1982-83	2,247	1,124	50.0	8,682	4,028	46.4	2,012	822	40.9
1983-84	2,320	1,127	48.6	8,816	4,152	47.1			

SOURCE: Personal Communication, Association of American Veterinary Medical Colleges, June 19, 1984

TABLE 8-38

ENROLLMENTS AND GRADUATES IN U. S. SCHOOLS OF VETERINARY MEDICINE BY SEX AND MINORITY GROUP, 1983-84

Sex and Minority Group	First Yr. Enrollment		Total Enrollment		Graduates	
	No.	V %	No.	V %	No.	V %
TOTAL	2,320	100.0	8,816	100.0	2,012	100.0
Male	1,193	51.4	4,664	52.9	1,190	59.2
Female	1,127	48.6	4,152	47.1	822	40.9
TOTAL MINORITY*	140	6.0	461	5.2	77	3.8
Male	61	2.6	229	2.6	43	2.1
Female	79	3.4	232	2.6	34	1.7
BLACK	63	2.7	203	2.3		
Male	23	1.0	88	1.0		
Female	40	1.7	115	1.3		
HISPANIC	38	1.6	128	1.5		
Male	21	0.9	77	0.9		
Female	17	0.7	51	0.6		
ASIAN	27	1.2	77	0.9		
Male	12	0.5	35	0.4		
Female	15	0.7	42	0.5		
PACIFIC ISLANDER	4	0.2	13	0.2		
Male	2	0.1	6	0.1		
Female	2	0.1	7	0.1		
AMERICAN INDIAN	8	0.3	33	0.4		
Male	3	0.1	19	0.2		
Female	5	0.2	14	0.2		

* Includes those who do not indicate specific racial identity.

SOURCE: Personal Communication, Association of American Veterinary Medical Colleges, January 15, 1982, April 11, 1983, and June 19, 1984

TABLE 8-39

ENROLLMENTS IN U.S. SCHOOLS OF VETERINARY MEDICINE BY SEX AND MINORITY, 1977-78 THRU 1983-84

	1977-1978				1979-1980				1980-1981				1982-1983				1983-1984			
	TOTAL	WOMEN	% W	% M	TOTAL	WOMEN	% W	% M	TOTAL	WOMEN	% W	% M	TOTAL	WOMEN	% W	% M	TOTAL	WOMEN	% W	% M
First Year Enrollment																				
Total	1,873	706	37.7		1,747	711	40.7		2,237	987	44.1		2,247	1,124	50.0		2,320	1,127	48.6	
Minority	80	39		4.3	37	18		2.2	115	56		5.1	120	70		5.3	140	79		6.0
Total Enrollment																				
Total	6,903	2,129	30.8		7,007	2,570	36.7		8,154	3,220	39.4		8,682	4,028	46.4		8,816	4,152	47.1	
Minority	261	109		3.8	307	146		4.4	NA	NA		NA	NA	NA		NA	461	232		5.2

TABLE 8-40

VETERINARIANS BY SEX, 1982 AND 1983

	TOTAL	WOMEN	% W
Members of the AMVA*	37,715	5,265	14.0
Retired Members of the AMVA	3,801	10	0.26
Estimate of Professionally Active Veterinarians	37,507	4,739	12.6

*1983 figure

SOURCE: Supply of Dentists, Optometrists, Pharmacists and Veterinarians, 1950-2000, Bureau of Health Professions, Health Resources and Services Administration

TABLE 8-41

ACTIVE VETERINARIANS BY TYPE OF EMPLOYMENT AND SEX: DECEMBER 31, 1982

TYPE OF EMPLOYMENT	TOTAL	WOMEN	% Women
All Active	38,810	4,810	12.4
Self-employed	20,090	1,190	5.9
Private practice employee	10,190	2,610	25.6
College or university	3,430	610	17.8
Industrial employee	990	60	6.1
Federal gov't--civilian	1,580	90	5.7
Armed Forces	760	50	6.6
State or local gov't	900	50	5.6
Other	870	150	17.2

FIELD: Optometry

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, May 1974 and Women in Health Careers, by Maryland Pennell and Shirlene Showell, Health Resources Administration, U.S. Department of HEW, HRA 75-55, June 1975; data from the Association of Schools and Colleges of Optometry; and surveys conducted by Council on Optometric Education, American Optometric Association

TABLE 8-42

TOTAL ENROLLMENTS AND GRADUATES OF OPTOMETRY BY SEX, ACADEMIC YEARS 1969-70 THRU 1982-83

YEAR	NUMBER OF STUDENTS					GRADUATES*		
	TOTAL	MEN	% MEN	WOMEN	% WOMEN	TOTAL	WOMEN	% WOMEN
1969-70	2,488	2,415	97.1	73	2.9	444	23	5.2
1970-71	2,831	2,749	97.1	82	2.9	530	12	2.3
1971-72	3,097	2,985	96.4	112	3.6	684	18	2.6
1972-73	3,328	3,158	94.9	170	5.1	692	17	2.5
1973-74	3,529	3,268	92.7	261	7.3	793	34	4.3
1974-75	3,679	3,328	90.5	351	9.5	809	39	4.8
1975-76	3,888	3,432	88.3	456	11.7	906	72	7.9
1976-77	4,033	3,491	86.6	542	13.4	923	103	11.2
1977-78	4,440	3,741	84.3	699	15.7	978	126	12.9
1978-79	4,436	3,679	82.9	757	17.1	916	140	15.3
1979-80	4,500	3,632	80.7	868	19.3	1,073	166	15.5
1980-81	4,540	3,555	78.3	985	21.7	1,096	204	18.6
1981-82	4,541	3,464	76.3	1,077	23.7	1,113	224	20.1
1982-83	4,561	3,388	74.3	1,173	25.7	1,120	246	22.0

*From 1974-75, this figure total is the same as 4th year student enrollment.

TABLE 8-43

ENROLLMENTS IN U.S. SCHOOLS OF OPTOMETRY BY ETHNIC STATUS 1973-74 THRU 1982-83

YEAR	TOTAL		BLACK		SPANISH SURNAMED		NATIVE AMERICAN. INDIAN		ASIAN AMERICAN		WHITE AND ALL OTHERS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1973-74	3,529	100.00	52	1.47	39	1.11	5	0.14	141	4.00	3,292	93.28
1974-75	3,679	100.00	73	1.98	45	1.22	8	0.22	153	4.16	3,400	92.42
1975-76	3,888	100.00	83	2.13	55	1.41	5	0.13	166	4.27	3,579	92.05
1976-77	4,033	100.00	89	2.21	46	1.14	6	0.15	157	3.89	3,735	92.61
1977-78	4,440	100.00	79	1.78	55	1.24	7	0.16	153	3.45	4,146	93.38
1978-79	4,436	100.00	62	1.39	66	1.49	11	0.25	166	3.74	4,131	93.12
1979-80	4,500	100.00	56	1.24	67	1.49	13	0.29	208	4.62	4,156	92.36
1980-81	4,540	100.00	57	1.26	80	1.76	12	0.26	243	5.35	4,148	90.48
1981-82	4,541	100.00	57	1.26	98	2.16	9	0.20	283	6.23	4,094	90.16
Men	3,464	76.28	29	0.64	72	1.59	6	0.13	181	3.99	3,176	69.94
Women	1,077	23.72	28	0.62	26	0.57	3	0.07	102	2.25	918	20.22
1982-83	4,561	100.00	76	1.67	107	2.35	19	0.42	296	6.49	4,063	89.08
Men	3,388	74.28	38	0.83	74	1.62	13	0.29	181	3.97	3,082	67.57
Women	1,173	25.72	38	0.83	33	0.72	6	0.13	115	2.52	981	21.51

FIELD: Pharmacy

SOURCE: Earned Degrees Conferred Series, 1968-69 thru 1981-82
U.S. Office of Education (NCES)

TABLE 8-44

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1968-69 - 1981-82

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1968-69	4,172	692	16.6	232	33	14.2	74	4	5.4
1969-70	4,543	853	18.8	229	38	16.6	79	11	13.9
1970-71	4,593	951	20.7	194	40	20.6	94	1	1.1
1971-72	4,668	1,088	23.3	221	49	22.2	101	8	7.9
1972-73	5,070	1,277	25.1	167	36	21.6	296	75	25.3
1973-74	5,773	1,560	27.0	240	44	18.3	132	16	12.1
1974-75	6,487	1,821	28.1	285	75	26.3	206	46	22.3
1975-76	7,018	2,137	30.5	307	60	19.5	81	8	9.9
1976-77	7,495	2,434	32.5	274	72	26.3	75	10	13.3
1977-78	7,468	2,712	36.3	320	91	28.4	96	13	13.5
1978-79	6,919	2,759	39.9	330	89	27.0	104	23	22.1
1979-80	7,122	2,919	41.0	380	117	30.8	89	16	18.0
1980-81	6,640	2,910	43.8	336	120	35.7	108	17	15.7
1981-82	6,367	2,930	46.0	368	135	36.7	127	21	16.5
TOTAL	84,344	27,043	32.1	3,883	999	25.7	1,662	269	16.2

SOURCE: The Status of Women in Pharmaceutical Education, by Christopher A. Rodowskas, Jr., American Association of Colleges of Pharmacy; Doctorate Recipients from United States Universities, Summary Reports 1972-83, National Research Council

TABLE 8-45

DOCTORAL RECIPIENTS IN THE PHARMACEUTICAL SCIENCES BY SEX, 1920-1983

YEAR OF DOCTORATE	PHARMACY			PHARMACOLOGY			PHARMACEUTICAL CHEMISTRY		
	TOTAL	WOMEN	% WOMEN	TOTAL	WOMEN	% WOMEN	TOTAL	WOMEN	% WOMEN
1920-29	11	1	9.1	22	2	11.0	5	0	0.0
1930-39	22	1	4.5	93	10	10.8	27	2	7.4
1940-49	18	1	5.5	190	7	3.7	47	4	8.5
1950-59	263	15	5.7	466	45	9.7	194	2	1.0
1960-69	366	21	5.7	958	98	10.2	471	18	3.8
1970-71	115	6	5.2	323	38	11.8	122	9	7.4
1971-72	57	2	3.5	187	23	12.3	48	8	16.7
1972-73	72	1	1.4	160	27	16.9	50	6	12.0
1973-74	61	5	8.2	178	35	19.7	62	6	9.7
1974-75	70	7	10.0	166	26	15.7	66	9	13.6
1975-76	63	9	14.3	205	25	12.2	55	9	16.4
1976-77	49	6	12.2	196	42	21.4	50	5	10.0
1977-78	61	9	14.8	198	12	6.1	51	5	9.8
1978-79	69	15	21.7	217	33	15.2	43	6	14.0
1979-80	70	9	12.9	257	60	23.3	52	15	28.8
1980-81	69	11	15.9	280	69	24.6	52	5	9.6
1981-82	81	12	14.8	276	76	27.5	55	11	20.0
1982-83	81	19	23.5	217	71	32.7	78	16	20.5
TOTAL	1,598	150	9.4	4,389	699	15.9	1,528	136	8.9

FIELD: Pharmacy

SOURCE: "Report of Degrees Conferred by Schools and Colleges of Pharmacy for the Academic Year 1975-76," by Lars Solander, reprinted from the American Journal of Pharmaceutical Education, Vol. 40, December 1976; and Degrees Conferred by Schools and Colleges of Pharmacy for the Academic Year 1981-82 and 1982-83 by Steven H. Chasin, American Association of Colleges of Pharmacy

TABLE 8-46

NUMBER AND PERCENT OF PHARMACY GRADUATES BY TYPE OF DEGREE, ETHNIC GROUP AND SEX, 1975-76, 1981-82 AND 1982-83

ETHNIC GROUP AND SEX	TYPE OF DEGREE								
	Bachelor of Science and Bachelor of Pharmacy			Master of Science			Doctor of Pharmacy and Doctor of Philosophy		
	1975-76	1981-82	1982-83	1975-76	1981-82	1982-83	1975-76	1981-82	1982-83
White American	6,191	5,561	4,916	279	282	282	498	550	622
Male	4,409	2,996	2,545	220	189	183	366	342	369
Female	1,782	2,565	2,371	59	93	99	132	208	253
% White	88.9	86.2	83.1	71.2	61.6	66.2	60.2	68.8	66.6
Black American	183	238	232	6	5	2	22	19	32
Male	107	86	80	5	2	1	8	11	10
Female	76	152	152	1	3	1	14	8	22
% Black	2.6	3.7	3.9	1.5	1.1	0.5	2.7	2.4	3.4
Spanish American	101	224	244	4	6	4	17	21	25
Male	64	80	86	2	2	1	14	9	12
Female	37	144	158	2	4	3	3	12	13
% Spanish American	1.4	3.5	4.1	1.0	1.3	0.9	2.1	2.6	2.7
Native American	11	12	8	0	1	0	0	1	0
Male	9	6	5	0	1	0	0	1	0
Female	2	6	3	0	0	0	0	0	0
% Native American	0.2	0.2	0.1	0.0	0.2	0.0	0.0	0.1	0.0
Asian American	149	198	176	24	6	11	218	131	158
Male	89	102	76	18	2	7	121	66	78
Female	60	96	100	6	4	4	97	65	80
% Asian American	2.1	3.1	3.0	6.1	1.3	2.6	26.4	16.4	16.9
Other American	35	18	7	6	6	8	4	1	4
Male	31	12	4	6	2	5	3	1	2
Female	4	6	3	0	4	3	1	0	2
% Other	0.5	0.3	0.1	1.5	1.3	1.9	0.5	0.1	0.4
Non-American	294	197	253	73	131	88	68	77	91
Male	197	133	148	49	87	58	55	52	57
Female	97	66	105	24	44	30	13	25	34
% Non-American	4.2	3.1	4.3	18.6	28.6	20.7	8.2	9.6	9.7
TOTAL*	6,964	6,448	5,919	392	458	426	827	800	934
Male	4,906	3,417	2,994	300	293	277	567	482	530
Female	2,058	3,031	2,925	92	165	149	260	318	404
% Female	29.6	47.0	49.4	23.5	36.0	35.0	31.4	39.8	43.3

* Includes those who did not designate ethnicity.

FIELD: Pharmacy

SOURCE: Report on Enrollment in Schools and Colleges of Pharmacy, 1973-74 and Graduate Enrollment Data, October 1973 and Fall 1977; Graduate Study in Member Colleges, 1974-75; Enrollment Report on Professional Degree Programs in Pharmacy, Fall 1976, 1978, 1979, 1980, 1981, 1982, and 1983; Report of Degrees Conferred by Schools & Colleges of Pharmacy, 1975-76, 1978-79, 1979-80, and 1981-82, American Association of Colleges of Pharmacy; prior annual reports; Women in Health Careers, Health Resources Administration, U.S. Department of Health, Education, & Welfare, June 1975.

TABLE 8-47

TOTAL ENROLLMENTS IN THE LAST THREE YEARS IN U.S. SCHOOLS OF PHARMACY BY SEX 1968-69 THRU 1983-84 AND GRADUATES IN PHARMACY BY SEX, 1968-69 THRU 1983-84

ACADEMIC YEAR	TOTAL	Men	Women	% W	BACHELOR'S GRADUATES		
					TOTAL	Women	% W
1968-69*	14,753	12,069	2,684	18.2	4,031	656	16.3
1969-70	15,292	12,104	3,188	20.8	4,366	792	18.1
1970-71*	15,326	11,956	3,370	22.0	4,356	876	20.1
1971-72	16,808	12,621	4,187	24.9	4,416	997	22.6
1972-73	18,956	13,936	5,020	26.5	4,745	1,150	24.2
1973-74	21,287	15,258	6,029	28.3	5,414	1,415	26.1
1974-75	23,235	16,168	7,067	30.4	6,246	1,685	27.0
1975-76	24,416	16,303	8,113	33.2	6,994	2,057	29.4
1976-77	24,082	15,226	8,856	36.8	7,649	2,541	33.2
1977-78	23,884	14,538	9,346	39.1	7,450	2,715	36.5
1978-79	23,649	13,636	9,442	39.9	7,095	2,835	40.0
1979-80	23,074	[illegible]028	10,046	43.5	6,985	2,831	40.5
1980-81	22,093	[illegible]039	10,254	46.4	6,908	3,144	45.5
1981-82	20,468	10,527	9,941	48.6	6,448	3,031	47.0
1982-83	19,350	9,511	9,839	50.8	5,919	2,925	49.4
1983-84	18,831	8,932	9,899	52.6			

* Excludes University of Puerto Rico.

TABLE 8-48

THIRD TO LAST YEAR ENROLLMENTS IN U.S. SCHOOLS OF PHARMACY BY SEX, 1968-69 THRU 1983-84

Academic Year	TOTAL	Men	Women	% W
1968-69*	5,406	4,322	1,084	20.1
1969-70	5,521	4,265	1,256	22.7
1970-71*	56,694	4,345	1,349	23.7
1971-72	6,532	4,849	1,683	25.8
1972-73	7,546	5,452	2,094	27.7
1973-74	8,143	[illegible],785	2,358	29.0
1974-75	8,734	5,910	2,824	32.3
1975-76	8,710	5,601	3,109	35.7
1976-77	8,208	4,969	3,239	39.5
1977-78	8,461	5,035	3,426	40.5
1978-79	8,321	4,694	3,627	43.6
1979-80	8,035	4,398	3,637	45.3
1980-81	7,551	3,896	3,655	48.4
1981-82	6,899	3,441	3,458	50.1
1982-83	6,574	3,078	3,496	53.2
1983-84	6,715	3,097	3,618	53.9

*Excludes University of Puerto Rico.

FIELD: Pharmacy

SOURCE: Report on Enrollment in Schools and Colleges of Pharmacy, 1973-74 and Graduate Enrollment Data, October 1973 and Fall 1977; Graduate Study in Member Colleges, 1974-75; Enrollment Report on Professional Degree Programs in Pharmacy, Fall 1976, 1978, 1979, 1980, 1981, 1982, and 1983; Report of Degrees Conferred by Schools & Colleges of Pharmacy, 1975-76, 1978-79, 1979-80, and 1981-82, American Association of Colleges of Pharmacy; prior annual reports; Women in Health Careers, Health Resources Administration, U.S. Department of Health, Education, & Welfare, June 1975.

TABLE 8-49

TOTAL FULL-TIME ENROLLMENT IN THE LAST THREE YEARS IN PHARMACY SCHOOLS BY SEX AND MINORITY GROUP, FALL 1974-FALL 1983

	Black		Hispanic American*		Native American		Asian American		Other American Minority		Non-American Minority		TOTAL MINORITY		
FALL	M	F	M	F	M	F	M	F	M	F	M	F	M	F	TOTAL
1974	433	294	357	454	26	6	398	249	35	8	735	341	1,984	1,352	3,336
1975	488	427	418	510	26	10	407	278	60	35	728	289	2,127	1,549	3,676
1976	447	491	380	582	26	11	422	303	20	16	565	237	1,860	1,670	3,530
1977	453	531	344	627	32	7	420	341	28	20	522	288	1,799	1,814	3,613
1978	338	554	338	609	21	13	489	392	36	35	459	248	1,690	1,851	3,541
1979	410	548	339	585	23	13	510	461	35	30	476	238	1,793	1,875	3,668
1980	381	564	360	574	21	15	497	538	23	18	520	320	1,802	2,029	3,831
1981	378	554	303	484	25	13	464	576	33	33	518	541	1,721	2,001	3,722
1982	389	546	315	469	21	15	425	647	42	44	628	402	1,820	2,123	3,943
1983	419	600	318	469	20	22	446	676	31	50	638	456	1,872	2,273	4,145

*Includes University of Puerto Rico.

SOURCE: Enrollment Report on Graduate Degree Programs in Pharmacy, Fall 1983, American Association of Colleges of Pharmacy

TABLE 8-50

FULL-TIME GRADUATE ENROLLMENTS BY PROGRAM TYPE, LEVEL, ETHNICITY AND SEX, FALL 1983

PROGRAM TYPE AND LEVEL	BLACK		HISPANIC		ASIAN		NATIVE AMERICAN		OTHER		FOREIGN		TOTAL MINORITY	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Pharmacy														
Master's	0	2	2	3	3	1	0	0	1	0	73	53	79	59
Doctorate	3	2	3	3	17	6	1	0	4	5	151	56	179	72
Pharm. Chemistry														
Master's	0	1	1	2	1	3	0	0	1	0	35	27	38	33
Doctorate	4	1	2	4	10	3	0	1	4	2	100	34	120	45
Pharmacognosy														
Master's	1	0	0	0	0	0	0	0	0	0	15	6	16	6
Doctorate	0	0	0	0	1	0	0	0	0	0	30	13	31	13
Pharmacology														
Master's	8	10	0	0	1	2	0	0	0	0	14	16	23	28
Doctorate	1	1	0	0	3	6	0	0	0	2	34	9	38	18
Pharmacy Admin.														
Master's	1	3	1	1	0	0	0	0	0	0	11	11	13	15
Doctorate	1	5	0	1	0	0	0	0	0	0	9	2	10	8
Hospital Pharmacy														
Master's	1	2	1	2	1	0	0	0	0	0	5	10	9	14
Doctorate	0	0	0	0	0	0	0	0	0	0	0	0	0	0

FIELD: Pharmaceutical Sciences

SOURCE: Enrollment Report on Graduate Degree Programs in Pharmacy, Fall 1974 thru Fall 1983, American Association of Colleges of Pharmacy

TABLE 8-51

NUMBER AND PERCENT OF FULL-TIME GRADUATE ENROLLMENTS AND MINORITY ENROLLMENTS IN MASTER'S AND PH.D. PROGRAMS BY FIELD AND SEX, FALL 1974 - FALL 1983

FIELD	TOTAL						MINORITY					
	Master's			Doctorate			Master's			Doctorate		
	Men	Women	% W	Men	Women	% W	Men	Women	% M	Men	Women	% M
PHARMACY												
Fall 1974	75	19	20.2	109	16	12.8	5	0	5.3	7	1	6.4
Fall 1976	78	24	23.5	163	23	12.4	7	4	10.8	19	4	12.4
Fall 1978	114	84	42.4	264	78	22.8	12	3	7.6	13	4	5.0
Fall 1980	124	88	41.5	305	105	25.6	10	2	5.7	28	8	8.8
Fall 1981	124	72	36.7	303	132	30.3	4	4	4.1	21	9	6.9
Fall 1982	136	90	37.0	337	137	28.9	4	6	4.6	24	11	7.4
Fall 1983	117	79	40.3	337	144	29.9	6	6	6.1	28	16	9.1
PHARM. CHEMISTRY												
Fall 1974	77	18	18.9	217	30	12.1	2	0	2.1	17	2	7.7
Fall 1976	92	36	28.1	209	47	18.4	1	3	3.1	13	4	6.6
Fall 1978	146	50	25.5	305	95	23.8	14	6	10.2	22	3	6.3
Fall 1980	119	63	34.6	310	107	25.7	6	9	8.2	15	9	5.8
Fall 1981	91	67	42.4	334	111	24.9	1	4	3.2	16	10	5.8
Fall 1982	86	54	38.6	338	121	26.4	5	10	10.7	12	8	4.4
Fall 1983	83	54	39.4	323	123	27.6	3	6	6.6	20	11	7.0
PHARMACOGNOSY												
Fall 1974	25	7	21.9	24	5	17.2	0	0	0.0	0	0	0.0
Fall 1976	17	15	46.9	32	12	27.3	0	0	0.0	2	1	6.8
Fall 1978	20	14	41.2	49	22	31.0	0	0	0.0	3	0	4.2
Fall 1980	15	10	40.0	54	16	22.9	0	1	4.0	4	0	5.7
Fall 1981	16	12	42.9	51	16	23.9	0	2	7.1	3	0	4.5
Fall 1982	16	12	42.9	54	20	27.0	0	1	3.6	0	0	0.0
Fall 1983	26	10	27.8	45	19	29.7	1	0	2.8	1	0	1.6
PHARMACOLOGY												
Fall 1974	67	23	25.6	135	27	16.7	4	1	5.6	6	4	6.2
Fall 1976	81	30	27.0	145	32	18.1	3	1	3.6	6	1	4.0
Fall 1978	103	47	31.3	163	44	21.3	8	5	8.7	5	2	3.4
Fall 1980	113	71	38.6	183	62	25.3	7	8	8.2	6	4	4.1
Fall 1981	98	70	41.7	180	80	30.8	9	8	10.1	4	5	3.5
Fall 1982	106	66	38.4	166	87	34.4	12	6	10.5	12	8	7.9
Fall 1983	83	70	45.8	207	102	33.0	9	12	13.7	4	9	4.2
PHARM. ADMINISTRATION												
Fall 1974	25	5	16.7	30	3	9.1	3	1	13.3	0	0	0.0
Fall 1976	37	11	22.9	38	6	13.6	8	2	20.8	0	0	0.0
Fall 1978	46	15	24.6	37	8	17.8	3	0	4.9	1	0	2.2
Fall 1980	50	27	35.1	35	14	28.6	1	0	1.3	1	2	6.1
Fall 1981	48	25	34.2	35	12	25.5	3	1	5.5	0	1	2.1
Fall 1982	36	23	39.0	43	18	29.5	2	2	6.8	0	2	3.3
Fall 1983	44	33	42.9	50	23	31.5	2	4	7.8	1	6	9.6
HOSPITAL PHARM.												
Fall 1974	99	21	17.5	0	0	0.0	3	0	2.5	0	0	0.0
Fall 1976	111	32	22.4	0	0	0.0	1	1	1.4	0	0	0.0
Fall 1978	108	37	25.5	1	0	0.0	3	0	2.1	0	0	0.0
Fall 1980	101	54	34.8	1	1	50.0	1	6	4.5	0	0	0.0
Fall 1981	97	56	36.6	2	1	33.3	2	5	4.6	0	1	33.3
Fall 1982	88	61	40.9	2	0	0.0	1	4	3.4	0	0	0.0
Fall 1983	72	63	46.7	0	0	0.0	4	4	5.9	0	0	0.0
TOTAL												
Fall 1974	368	93	20.2	515	81	13.6	17	2	4.1	30	7	6.2
Fall 1976	416	148	26.2	587	120	17.0	20	11	5.5	40	10	7.1
Fall 1978	537	247	31.5	819	247	23.2	36	19	7.0	44	9	5.0
Fall 1980	522	313	37.5	888	305	25.6	25	26	6.1	54	23	6.5
Fall 1981	474	304	39.1	905	352	28.0	19	24	5.5	44	26	5.6
Fall 1982	467	296	38.8	940	383	28.9	24	26	6.6	48	29	5.8
Fall 1983	425	309	42.1	962	411	29.9	25	32	7.8	54	42	7.0

SOURCE: Health Resources and Services Administration, Bureau of Health Professions, Division of Associated and Dental Health Professions

TABLE 8-52

NUMBER OF ACTIVE PHARMACISTS, BY SEX: ESTIMATED 1982, AND PROJECTED FOR SELECTED YEARS, 1985-2000

YEAR	Number of Active Pharmacists	Men	Women	% W
1982	151,400	119,000	32,400	21.4
1985	159,400	119,600	39,800	25.0
1990	169,900	119,000	50,900	30.0
1995	178,000	117,100	60,900	34.2
2000	184,900	114,800	70,100	37.9

FIELD: Podiatry

SOURCE: Minorities and Women in the Health Fields, Health Resources Administration, U.S. Dept. of HEW, May 1974; Women in Health Careers, U.S. Dept. of HEW; and data from American Association of Colleges of Podiatric Medicine

TABLE 8-53

TOTAL ENROLLMENTS IN SCHOOLS OF PODIATRY IN THE UNITED STATES BY SEX, 1969-70 THRU 1983-84

ACADEMIC YEAR	NUMBER OF STUDENTS				
	TOTAL	MEN	% MEN	WOMEN	% WOMEN
1969-70	1,095	1,085	99.1	10	0.9
1970-71	1,148	1,132	98.6	16	1.4
1971-72	1,268	1,252	98.7	16	1.3
1972-73	1,401	1,380	98.5	21	1.5
1973-74	1,623	1,583	97.6	40	2.4
1974-75	1,836	1,777	96.8	59	3.2
1975-76	2,081	1,981	95.2	100	4.8
1976-77	2,204	2,047	92.9	157	7.1
1977-78	2,388	2,129	89.2	259	10.8
1978-79	2,498	2,230	89.3	268	10.7
1979-80	2,534	2,226	87.9	305	12.1
1980-81	2,577	2,271	88.1	306	11.9
1981-82	2,584	2,223	86.0	361	14.0
1982-83	2,608	2,180	83.6	428	16.4
1983-84	2,556	2,080	81.4	476	18.6

SOURCE: Journal of Podiatric Medical Education, Vol. 12, No. 1, Winter 1981, and personal communication, American Association of Colleges of Podiatric Medicine

TABLE 8-54

MINORITY ENROLLMENT IN COLLEGES OF PODIATRIC MEDICINE, 1978-1984

MINORITY GROUP	1978-79		1979-80		1980-81		1981-82		1982-83		1983-84	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Black	77	3.1	93	3.7	110	4.3	125	4.8	154	5.9	170	6.7
Hispanic	27	1.1	28	1.1	32	1.2	40	1.5	33	1.3	41	1.6
American Indian	8	0.3	5	0.2	6	0.2	5	0.2	5	0.2	9	0.4
Asian/Pac. Islander	51	2.0	63	2.5	68	2.6	68	2.6	75	2.9	68	2.7
Total Minority	163	6.5	189	7.5	216	8.4	238	9.2	267	10.2	297	11.6
Total Students	2,498	100.0	2,531	100.0	2,577	100.0	2,584	100.0	2,608	100.0	2,556	100.0

FIELD: Nursing

SOURCE: Earned Degrees Conferred Series, 1969-70 thru 1981-82
U.S. Office of Education (NCES)

TABLE 8-55

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1969-70 - 1981-82

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1969-70	11,280	11,120	98.6	1,549	1,531	98.8	11	10	90.9
1970-71	12,283	12,029	97.9	1,542	1,511	98.0	7	6	85.7
1971-72	13,245	12,902	97.4	1,846	1,815	98.3	10	10	100.0
1972-73	15,526	15,063	97.0	2,093	1,983	94.7	17	13	76.5
1973-74	19,409	18,653	96.1	2,293	2,229	97.2	14	14	100.0
1974-75	23,813	22,709	95.4	2,220	2,154	97.0	16	16	100.0
1975-76	26,846	25,484	94.9	3,058	2,968	97.1	16	16	100.0
1976-77	28,402	26,870	94.6	3,257	3,155	96.9	24	22	91.6
1977-78	30,307	28,661	94.6	3,812	3,671	96.3	56	53	94.6
1978-79	31,808	3,002	94.3	4,256	4,088	96.1	68	65	95.6
1979-80	32,852	31,054	94.5	4,637	4,464	96.3	118	116	98.3
1980-81	32,794	31,140	95.0	5,096	4,899	96.1	113	109	96.5
1981-82	33,177	31,482	94.9	5,312	4,034	94.8	134	128	95.5
TOTAL	311,742	297,169	95.3	40,971	39,052	96.4	604	578	95.7

SOURCE: The Registered Nurse Population, November, 1980; Health Resources and Services Administration, 1983

TABLE 8-56

REGISTERED NURSE POPULATION, BY SEX, RACIAL/ETHNIC BACKGROUND, AGE GROUP AND EMPLOYMENT STATUS, 1980

Sex, Racial/Ethnic and Age group	Totals 1/			Employed in nursing			Not employed in nursing		
	Number in Sample	Estimated Number	Estimated Percent	Number in Sample	Estimated Number	Estimated Percent	Number in Sample	Estimated Number	Estimated Percent
Total	30,375	1,662,382	100.0	23,563	1,272,851	100.0	6,791	388,537	100.0
Sex									
Male	824	45,060	2.7	716	38,842	3.0	108	6,218	1.6
Female	29,275	1,603,069	96.4	22,643	1,223,301	96.1	6,624	379,432	97.7
Not known	276	14,256	.9	204	10,709	.8	59	2,887	.7
Racial/Ethnic Backgrounds									
White (non-hispanic)	28,018	1,521,752	91.5	21,567	1,151,221	90.4	6,444	370,263	95.3
Black (non-hispanic)	905	60,845	3.7	812	54,585	4.3	92	6,222	1.6
Asian/Pacific Islander	575	33,600	2.0	495	30,470	2.4	80	3,130	.8
American Indian/Alaskan Native	87	4,249	.3	64	3,045	.2	23	1,204	.3
Hispanic	383	20,816	1.2	325	17,938	1.4	58	2,878	.7
Not known	407	21,118	1.3	300	15,592	1.2	94	4,839	1.2
Age Group									
Less than 25	2,393	128,556	7.7	2,275	122,356	9.6	118	6,200	1.6
25-29	5,573	289,777	17.4	4,848	254,138	20.0	723	35,599	9.2
30-34	4,707	255,400	15.4	3,815	206,097	16.2	892	49,303	12.7
35-39	3,774	205,978	12.4	2,958	159,025	12.5	815	46,918	12.1
40-44	3,221	180,326	10.8	2,534	141,459	11.1	687	38,867	10.0
45-49	2,751	150,087	9.0	2,152	117,467	9.2	599	32,620	8.4
50-54	2,472	137,154	8.2	1,877	102,987	8.1	595	34,167	8.8
55-59	2,248	124,613	7.5	1,546	83,003	6.5	701	41,561	10.7
60-64	1,426	81,685	4.9	757	41,791	3.3	665	39,697	10.2
65 and over	1,199	74,270	4.5	334	18,657	1.5	863	55,527	14.3
Not known	613	34,737	2.1	467	25,876	2.0	133	8,176	2.1

1/ Includes an estimated 994 registered nurses for whom it was not known whether or not they were employed in nursing.

NOTE: Estimated number and percent may not add to total due to rounding.

FIELD: Hospital Administration

SOURCE: Earned Degrees Conferred Series, 1968-69 thru 1981-82
U.S. Office of Education (NCES)

TABLE 8-57

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1968-69 - 1981-82

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Bcth Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1968-69	37	3	8.1	403	59	14.6	2	1	50.0
1969-70	32	6	18.8	479	64	13.4	7	0	0.0
1970-71	60	4	6.7	518	64	12.4	14	0	0.0
1971-72	126	55	43.6	677	102	15.1	12	0	0.0
1972-73	121	16	13.2	743	82	11.0	12	2	16.7
1973-74	185	32	17.3	990	206	20.8	21	4	19.0
1974-75	306	99	32.4	997	196	19.6	13	0	0.0
1975-76	421	150	35.6	1,139	278	24.4	11	0	0.0
1976-77	668	320	47.9	1,354	355	26.2	18	3	16.7
1977-78	1,158	716	61.8	1,565	567	36.2	12	2	16.7
1978-79	1,338	864	64.6	1,748	671	38.4	16	4	25.0
1979-80	1,692	1,154	68.2	1,698	718	42.3	13	4	30.8
1980-81	1,581	1,043	66.0	1,996	933	46.7	12	2	16.7
1981-82	1,978	1,397	70.6	1,640	805	49.1	20	5	25.0
TOTAL	10,703	5,859	54.7	15,947	5,100	32.0	183	27	14.8

FIELD: Medical Technology

SOURCE: Earned Degrees Conferred Series, 1968-69 thru 1981-82
U.S. Office of Education (NCES)

TABLE 8-58

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1968-69 - 1981-82

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1968-69	2,846	2,551	89.6	28	23	82.1	0	0	0.0
1969-70	3,228	2,823	87.5	71	57	80.3	0	0	0.0
1970-71	3,145	2,755	87.6	72	55	76.4	4	1	25.0
1971-72	3,407	2,880	84.5	97	62	63.9	0	0	0.0
1972-73	3,806	3,102	81.5	95	77	81.1	0	0	0.0
1973-74	4,840	3,864	79.8	164	95	57.9	0	0	0.0
1974-75	5,087	4,005	78.7	174	91	52.3	0	0	0.0
1975-76	5,445	4,356	80.0	266	137	51.5	0	0	0.0
1976-77	5,286	4,242	80.2	333	184	55.3	3	2	66.7
1977-78	5,288	4,221	79.8	292	175	59.9	4	1	25.0
1978-79	5,235	4,143	79.1	303	179	59.1	1	0	0.0
1979-80	5,130	4,128	80.5	231	154	66.7	1	1	100.0
1980-81	4,896	4,012	81.9	233	150	64.4	1	1	100.0
1981-82	4,596	3,784	82.3	207	131	63.3	4	3	75.0
TOTAL	62,235	50,866	81.7	2,566	1,570	61.2	18	9	50.0

FIELD: Physical Therapy

SOURCE: Earned Degrees Conferred Series, 1968-69 thru 1981-82
U.S. Office of Education (NCES)

TABLE 8-59

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1968-69 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1968-69	1,071	922	86.1	41	30	73.2
1969-70	1,091	922	84.5	49	32	65.3
1970-71	1,306	1,045	80.0	75	56	74.7
1971-72	1,483	1,182	79.7	55	30	54.5
1972-73	1,756	1,381	78.6	78	51	65.4
1973-74	1,900	1,497	78.8	111	77	69.4
1974-75	2,121	1,615	76.1	133	85	63.9
1975-76	2,091	1,620	77.5	167	113	67.7
1976-77	2,333	1,790	76.7	162	101	62.3
1977-78	2,418	1,903	78.7	258	184	71.3
1978-79	2,651	2,079	78.4	242	154	63.6
1979-80	2,372	1,845	77.8	282	203	72.0
1980-81	2,745	2,213	80.6	250	186	74.4
1981-82	2,736	2,200	80.4	317	233	73.5
TOTAL	28,074	22,214	79.1	2,200	1,535	69.8

FIELD: Public Health

SOURCE: Earned Degrees Conferred Series, 1968-69 thru 1981-82
U.S. Office of Education (NCES)

TABLE 8-60

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1968-69 - 1981-82

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1968-69	83	45	54.2	1,160	405	34.9	78	13	16.7
1969-70	58	30	51.7	1,210	439	36.3	90	20	22.2
1970-71	127	36	28.3	1,257	473	37.6	85	19	22.4
1971-72	121	32	26.4	1,575	631	40.1	81	25	30.9
1972-73	184	66	35.9	1,591	713	44.8	84	24	28.6
1973-74	273	89	32.6	1,781	828	46.5	113	32	28.3
1974-75	370	165	44.6	1,981	943	47.6	127	43	33.9
1975-76	585	285	48.7	2,165	1,047	48.4	165	59	35.7
1976-77	519	257	49.5	2,176	1,102	50.6	141	47	33.3
1977-78	552	291	52.7	2,288	1,210	52.9	148	59	39.9
1978-79	506	267	52.8	2,479	1,391	56.1	169	65	38.5
1979-80	586	347	59.2	2,596	1,389	53.5	182	78	42.9
1980-81	694	456	65.7	2,731	1,557	57.0	194	83	42.8
1981-82	705	477	67.7	2,312	1,340	58.0	207	102	49.3
TOTAL	5,363	2,843	53.0	27,302	13,468	49.3	1,864	669	35.9

FIELD: Speech Pathology

SOURCE: Earned Degrees Conferred Series, 1970-71 through 1981-82, U.S. Office of Education (NCES)

TABLE 8-61

DEGREES CONFERRED IN SPEECH PATHOLOGY AND AUDIOLOGY, BY DEGREE LEVEL AND SEX, 1970-71 - 1981-82

YEAR	BACHELOR'S			MASTER'S			Ph.D.s		
	TOTAL	WOMEN	% WOMEN	TOTAL	WOMEN	% WOMEN	TOTAL	WOMEN	% WOMEN
1970-71	1,427	1,251	87.7	845	690	81.7	70	22	31.4
1971-72	1,863	1,609	86.4	1,047	894	85.4	58	19	32.8
1972-73	2,574	2,259	87.8	1,417	1,175	82.9	69	23	33.3
1973-74	3,278	2,934	89.5	1,964	1,671	85.1	78	28	35.9
1974-75	3,732	3,345	89.6	2,377	2,011	84.6	71	30	42.3
1975-76	3,925	3,582	91.3	3,132	2,735	87.3	109	46	42.2
1976-77	3,864	3,555	92.0	3,027	2,711	89.6	96	49	51.0
1977-78	3,551	3,247	91.4	3,190	2,921	91.6	121	58	47.9
1978-79	3,554	3,297	92.8	3,496	3,180	91.0	113	60	53.1
1979-80	3,576	3,319	92.8	3,304	3,056	92.5	110	56	50.9
1980-81	3,445	3,225	93.6	3,226	2,982	92.4	112	59	52.7
1981-82	3,414	3,235	94.8	3,104	2,895	93.3	114	67	58.8
TOTAL	38,203	34,858	91.2	30,129	26,921	89.4	1,121	517	46.1

FIELD: Public Health

SOURCE: Data compiled by the Association of Schools of Public Health, Washington, D.C.

TABLE 8-62

TOTAL ENROLLMENT IN SCHOOLS OF PUBLIC HEALTH BY SEX AND MINORITY, ACADEMIC YEARS 1974-75 THROUGH 1982-83
(U.S. Citizens Only)

Academic Year	Total Students Identified by Sex[1]	Female Students	Percent Female of Total Students Identified by Sex	Total Students Identified by Race[2]	Racial/Ethnic Category				Total Minority	Percent Minority of Total Students Identified by Race
					Black	Hispanic	Asian	Indian		
1974-75	4,980	2,307	46.3	4,515	351	76**	156	49	632	14.1
1975-76	5,411	2,646	48.9	5,268	348	309	218	59	934	17.7
1976-77	5,569	2,786	50.0	*	*	*	*	*	*	*
1977-78	5,781	2,999	51.9	*	*	*	*	*	*	*
1978-79	6,315	3,472	55.0	*	*	*	*	*	*	*
1979-80	6,523	3,677	56.4	6,485	415	173**	408	68	1,064	16.4
1980-81	5,994	3,472	57.9	5,994	379	242	393	88	1,102	18.4
1981-82	7,366	4,350	59.1	6,504	376	271	335	82	1,064	16.4
1982-83	7,614	4,624	60.7	7,005	403	359	368	70	1,200	17.1

[1] Counts of students not identified by sex in the years listed are: 1974-75, 92; 1975-76, 4; 1976-77, 28; 1977-78, 23; 1989-79, 25; 1979-80, 9; 1980-81, 53; 1981-82, 0; 1982-83, 1.

[2] Counts of students not identified by race in the years listed are: 1974-75, 557; 1975-76, 147; 1979-80, 47; 1980-81, 53; 1981-82, 862; 1982-83, 610.

**Puerto Rican not included.

FIELD: Medical and Health

SOURCE: Federal Civilian Workforce Statistics, Affirmative Employment Statistics, U.S. Office of Personnel Management, CIG-82-71, September 30, 1982

TABLE 8-63

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN THE MEDICAL, HEALTH AND VETERINARY MEDICAL SCIENCES BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 30, 1982

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		AM. INDIAN		ASIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% I	No.	% A	No.	% W
General Health Science	1,491	582	39.0	193	12.9	92	6.2	126	8.5	29	1.9	9	0.6	29	1.9	1,298	87.1
Medical Officer	25,719	4,244	16.5	4,261	16.6	1,015	3.9	718	2.8	1,267	4.9	32	0.1	2,244	8.7	21,458	83.4
Physician's Assistant	936	237	25.3	213	22.8	74	7.9	91	9.7	39	4.2	77	8.2	6	0.6	723	77.2
Nurse	38,600	35,311	93.0	8,505	22.0	8,077	20.9	4,806	12.5	1,198	3.1	526	1.4	1,975	5.1	30,095	78.0
Nurse Anesthetist	539	353	65.5	69	12.8	56	10.4	42	7.8	19	3.5	0	0.0	8	1.5	470	87.2
Dietitian & Nutritionist	1,483	1,432	96.6	303	20.4	292	19.7	162	10.9	66	4.5	7	0.5	68	4.6	1,180	79.6
Occupational Therapist	728	640	87.9	99	13.6	84	11.5	49	6.7	26	3.6	1	0.1	23	3.2	629	86.4
Physical Therapist	693	470	67.8	103	14.9	70	10.1	45	6.5	40	5.8	0	0.0	18	2.6	590	85.1
Corrective Therapist	530	97	18.3	125	23.6	20	3.8	111	20.9	6	1.1	1	0.2	7	1.3	405	76.4
Manual Arts Therapist	283	18	6.4	32	11.3	1	0.4	25	8.8	4	1.4	2	0.7	1	0.4	251	88.7
Rec/Creative Arts Therapist	675	233	34.5	115	17.0	32	4.7	91	13.5	20	3.0	0	0.0	4	0.6	560	83.0
Educational Therapist	110	61	55.5	23	20.9	13	11.8	23	20.9	0	0.0	0	0.0	0	0.0	87	79.1
Medical Technologist	4,788	3,263	68.1	1,029	21.5	645	13.5	502	10.5	209	4.4	34	0.7	284	5.9	3,759	78.5
Medical Technician	2,998	1,733	57.8	1,019	34.0	581	19.4	702	23.4	151	5.0	84	2.8	82	2.7	1,979	66.0
Pharmacist	2,955	703	23.8	455	15.4	173	5.9	184	6.2	95	3.2	15	0.5	161	5.4	2,500	84.6
Pharmacy Technician	2,048	1,110	54.2	691	33.7	370	18.1	461	22.5	103	5.0	40	2.0	87	4.2	1,357	66.3
Optometrist	165	12	7.3	10	6.1	0	0.0	4	2.4	0	0.0	0	0.0	6	3.6	155	93.9
Speech Pathology & Audiol.	798	464	58.1	46	5.8	35	4.4	20	2.5	11	1.4	6	0.8	9	1.1	752	94.2
Podiatrist	155	14	9.0	11	7.1	4	2.6	7	4.5	1	0.6	1	0.6	2	1.3	144	92.9
Diagno./Radiol. Technologist	2,780	1,225	44.1	801	23.8	328	11.8	519	18.7	164	5.9	83	3.0	35	1.3	1,979	71.2
Dental Officer	1,495	125	8.4	121	8.1	23	1.5	57	3.8	38	2.5	4	0.3	22	1.5	1,374	91.9
Dental Assistant	2,975	2,773	93.2	970	32.6	893	30.0	445	15.2	116	3.9	334	11.2	75	2.5	2,005	67.4
Dental Hygienist	374	363	97.1	52	13.9	48	12.8	30	8.0	13	3.5	0	0.0	9	2.4	322	86.1
Industrial Hygienist	804	142	17.7	111	13.8	26	3.2	58	7.2	23	2.9	1	0.1	29	3.6	693	86.2
Veterinary Med. Scientist	2,240	108	4.8	349	15.6	26	1.2	105	4.7	60	2.7	7	0.8	177	7.9	1,891	84.4
Hospital Administrator	523	60	11.5	93	17.8	19	3.6	30	5.7	7	1.3	54	10.3	2	0.4	430	82.2
Health System Specialist	559	122	21.8	65	11.6	23	4.1	37	6.6	9	1.6	14	2.5	5	0.9	494	88.4

CHAPTER 9

SOCIAL AND BEHAVIORAL SCIENCES

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FIELD: Social Sciences

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1983, National Research Council

TABLE 9-1

DOCTORATES AWARDED FROM 1920 TO 1983 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920–FY1972			FY1973–FY1977			FY1978–FY1981			FY1982			FY1983		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Social Sciences, Subtotal	37,197	3,754	10.1	20,186	4,143	20.5	16,344	4,846	29.7	3,096	857	27.7	6,055	2,380	39.3
Communications[1]	140	27	19.3	1,134	288	25.4	1,010	346	34.3	249	101	40.5	252	103	40.9
Anthropology	2,503	563	22.5	1,904	651	34.2	931	657	70.6	333	138	41.4	373	175	46.9
Sociology	7,045	1,227	17.4	3,383	1,008	29.8	2,447	929	38.0	568	214	37.7	525	216	41.1
Economics	13,638	738	5.4	4,270	377	8.8	3,110	396	12.7	735	98	13.3	792	129	16.3
Econometrics[2]	381	17	4.5	137	6	4.4	84	6	7.1	24	2	8.3	21	4	19.0
Statistics	475	26	5.5	212	24	11.3	141	34	24.1	43	5	11.6	47	5	10.6
Demography													26	12	46.1
Political Science & Public Admin.[3]	8,147	683	8.4	2,344	337	14.4									
Political Science & Gov't[3]				1,241	208	16.8	2,075	411	19.8	459	106	23.1	397	83	20.9
Policy Studies[3]				267	40	15.0	611	108	17.7	172	37	21.5	68	26	38.2
International Relations	1,506	146	9.7	589	77	13.1	339	50	14.7	77	11	14.3	77	15	19.5
Criminology[4]							65	15	23.1	30	6	20.0	49	7	14.3
Geography	1,973	143	7.2	910	84	9.2	526	91	17.3	106	19	17.9	121	37	30.6
Area Studies	349	47	13.5	147	30	20.4	89	28	31.5	19	7	36.8	20	11	55.0
Urban & Regional Planning[5]	85	0	0.0	371	48	12.9	340	73	21.5	79	18	22.8	74	22	29.7
Social Sciences, General[6]	191	28	14.7	170	44	25.9	121	45	37.2	33	13	39.4	17	3	17.6
Social Sciences, Other	904	129	14.3	804	181	22.5	527	185	35.1	109	43	39.4	141	63	44.7

[1] Added in 1972. Broken into subfields in 1983, and numbers no longer included in the "Social Sciences Subtotal" after 1982.

[2] Originally shown as "Statistics, including Econometrics." In 1966, it was broken out into "Econometrics" and "Statistics".

[3] "Political Science" and "Public Administration" were divided into two subfields in 1976. Because a number of doctorate recipients reported on old forms in 1976 both the old and new fields were included that year. Broken out as "Political Science and Government" and "Policy Studies" in 1983.

[4] Added in 1980.

[5] Added in 1970.

[6] Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "General" classification of their respective fields.

SOURCE: Summary Report: Doctorate Recipients from United States Universities, 1973 through 1983, National Research Council

TABLE 9-2

PH.D. DEGREES IN SELECTED SOCIAL SCIENCES BY CITIZENSHIP & RACE/ETHNICITY, 1973-1983

YEAR	Total	Non-Citizen Temp Visas	Citizens and Permanent Visa Non-Citizens						
			Total	Amer. Indian	Asian	Black	White	His-panic	Other & Unknown
ANTHROPOLOGY									
1973-76	1,518	137	1,381	9	17	26	1,149	15	165
1977-79	1,168	84	1,051	12	18	14	904	20	83
1980	369	17	346	1	9	10	300	3	23
1981	369	25	329	1	4	7	283	9	25
1982	333	30	295		4	7	268	7	10
1983	373	24	335	2	2	7	306	8	10
1973-83	4,130	317	3,813	25	54	71	3,255	62	316
SOCIOLOGY									
1973-76	2,658	255	2,403	8	46	97	1,924	22	306
1977-79	1,967	181	1,749	17	52	92	1,459	41	88
1980	602	64	529	3	14	24	451	16	21
1981	603	69	520		18	25	444	15	18
1982	568	54	494	2	19	29	414	18	12
1983	525	64	436		10	26	377	11	12
1973-83	6,923	687	6,131	30	159	293	5,069	123	457
ECONOMICS									
1973-76	3,461	816	2,645	8	90	30	2,214	16	287
1977-79	2,367	574	1,724	5	81	34	1,468	20	116
1980	745	187	538	2	37	13	443	13	30
1981	807	199	575	2	32	16	477	12	36
1982	735	195	491		36	18	409	12	16
1983	792	205	549		36	15	475	8	15
1973-83	8,907	2,176	6,522	17	312	126	5,486	81	500
POLITICAL SCIENCE									
1973-76	628	88	540	3	9	14	477	8	29
1977-79	1,738	180	1,504	5	37	84	1,260	27	91
1980	505	47	439	1	11	16	379	10	22
1981	445	72	373		15	25	305	8	20
1982	459	60	372	1	10	24	311	10	16
1983	397	55	322	1	8	18	266	11	18
1973-83	4,172	502	3,550	11	90	181	2,998	74	196

FIELD: Social Sciences

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and 1980-1983 Summary Report, Doctorate Recipients from United States Universities, National Research Council, 1981-1984

TABLE 9-3

NUMBER OF Ph.D. RECIPIENTS IN THE SOCIAL SCIENCES BY TYPE OF CITIZENSHIP, 1960-1983

YEAR	TOTAL	U.S.	FOREIGN			Citizenship not Known
			TOTAL	Immigrants	Non-Immigrants	
1960	1,710	1,488	204	51	153	18
1961	1,810	1,574	204	38	166	32
1962	1,925	1,647	240	30	210	38
1963	2,035	1,759	230	59	171	46
1964	2,299	1,951	283	70	213	65
1965	2,379	2,028	315	75	240	36
1966	2,697	2,266	361	80	281	70
1967	3,160	2,666	414	126	288	80
1968	3,534	3,029	433	122	311	72
1969	4,036	3,452	505	152	353	79
1970	4,616	3,926	634	204	430	56
1971	5,285	4,503	718	242	476	64
1972	5,621	4,738	771	265	506	112
1973	5,945	4,986	846	258	588	113
1974	6,017	4,919	815	226	589	283
1975	6,209	5,253	839	228	611	117
1976	6,373	5,434	834	195	639	105
1977	6,365	5,340	805	203	602	220
1978	6,057	5,033	735	202	533	289
1979	5,943	4,957	736	179	557	250
1980	6,253	5,296	726	200	526	231
1981	6,505	5,463	772	200	572	270
1982	6,250	5,112	788	201	587	350
1983	6,055	5,020	757	187	570	276

FIELD: Social and Behavioral Sciences

SOURCE: 1980 Census of Occupations, Special EEO File, Bureau of the Census

TABLE 9-4

SOCIAL AND BEHAVIORAL SCIENTISTS AND SOCIAL WORKERS BY BROAD FIELD, SEX AND RACE/ETHNICITY, 1980

	Psychologists		Economists		Sociologists		Other Social Scientists		Social Workers	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	92,929	100.00	95,565	100.00	2,550	100.00	13,477	100.00	459,984	100.00
MALES	49,102	52.84	67,218	70.34	1,489	58.39	8,177	60.67	161,258	35.06
White*	44,635	48.03	61,773	64.64	1,294	50.75	7,483	55.52	118,446	25.75
Black*	2,362	2.54	2,096	2.19	111	4.35	214	1.59	26,559	5.77
Indian/Alaskan Native*	143	0.15	169	0.18	0	0.00	38	0.28	1,623	0.35
Asian/Pacific Isl.*	515	0.55	1,599	1.67	44	1.73	172	1.28	1,601	0.57
Other Race*	68	0.07	98	0.10	0	0.00	19	0.14	271	0.06
Hispanic	1,379	1.48	1,483	1.55	40	1.57	251	1.86	11,758	2.56
FEMALES	43,827	47.16	28,347	29.66	1,061	41.66	5,300	39.33	298,726	64.94
White*	37,766	40.64	25,241	26.41	927	36.35	4,739	35.16	215,573	46.87
Black*	4,100	4.41	1,828	1.91	42	1.65	242	1.80	60,946	13.25
Indian/Alaskan Native*	193	0.21	68	0.07	12	0.47	30	0.22	2,565	0.56
Asian/Pacific Isl.*	546	0.59	565	0.59	48	1.88	95	0.70	3,765	0.82
Other Race*	94	0.10	37	0.04	0	0.00	5	0.04	403	0.09
Hispanic	1,128	1.21	608	0.64	32	1.25	189	1.40	15,474	3.36

* Non-Hispanic

FIELD: Social Work and Helping Services

SOURCE: Earned Degrees Conferred Series, 1970-71 thru 1981-82
U.S. Office of Education (NCES)

TABLE 9-5

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 - 1981-82

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	4,690	3,538	75.4	6,148	3,710	60.3	126	39	36.9
1971-72	6,223	4,661	74.8	6,656	4,049	60.8	99	31	31.3
1972-73	8,182	6,035	73.7	6,896	4,353	63.1	111	29	26.1
1973-74	9,960	7,115	71.4	7,974	4,965	62.3	109	33	30.3
1974-75	10,784	8,049	74.6	8,852	5,527	62.4	135	48	35.5
1975-76	11,032	8,350	75.7	9,002	6,012	66.8	163	73	44.8
1976-77	11,673	9,035	77.4	9,596	6,549	68.3	131	55	42.0
1977-78	12,672	9,947	78.5	9,986	6,998	70.1	138	66	47.8
1978-79	13,180	10,608	80.5	9,893	7,025	71.0	136	61	44.9
1979-80	12,870	10,503	81.6	10,158	7,326	72.1	162	81	50.0
1980-81	12,410	10,303	83.0	10,240	7,626	74.5	193	104	53.9
1981-82	11,813	9,946	84.2	9,959	7,664	77.0	198	108	54.6
TOTAL	125,489	98,090	78.2	105,360	71,804	68.2	1,701	728	42.8

FIELD: Social Sciences, Psychology Welfare

SOURCE: Federal Civilian Workforce Statistics, Affirmative Employment Statistics, U.S. Office of Personnel Management, CIG-82-71, September 30, 1982

TABLE 9-6

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN THE SOCIAL SCIENCES, PSYCHOLOGY AND WELFARE BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 30, 1982

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		AM. INDIAN		ASIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% I	No.	% A	No.	% W
Social Science	2,739	1,008	36.8	600	21.9	276	10.1	424	15.5	94	3.4	40	1.5	42	1.5	2,139	78.1
Economics	5,224	965	18.5	388	7.4	141	2.7	219	4.2	67	1.3	12	0.2	90	1.7	4,836	92.6
Foreign Affairs	2,364	380	16.1	179	7.6	59	2.5	103	4.4	50	2.1	3	0.1	23	1.0	2,185	92.4
International Relations	61	7	11.5	4	6.6	1	1.6	3	4.9	0	0.0	0	0.0	1	1.6	57	93.4
Manpower Research & Analysis	59	23	39.0	14	23.7	8	13.6	13	22.0	0	0.0	0	0.0	1	1.7	45	76.3
Geography	177	35	19.8	7	4.0	5	2.8	4	2.3	1	0.6	0	0.0	2	1.1	170	96.0
History	570	106	18.6	29	5.1	10	1.8	13	2.3	7	1.2	3	0.5	6	1.1	541	94.9
Psychology	3,963	866	21.9	245	6.2	93	2.3	116	2.9	62	1.6	22	0.6	45	1.1	3,718	93.8
Sociology	123	45	36.6	14	11.4	3	2.4	7	5.7	1	0.8	1	0.8	5	4.1	109	88.6
Social Work	3,933	1,830	46.5	882	22.4	495	12.6	596	15.2	134	3.4	102	2.6	50	1.3	3,051	77.6
General Anthropology	71	14	19.7	10	14.1	2	2.8	0	0.0	7	9.9	2	2.8	1	1.4	61	85.9
Archeology	527	154	29.2	18	3.4	2	0.4	2	0.2	7	1.3	9	1.7	1	0.2	509	96.6
Social Science Aid & Tech.	1,049	491	46.8	267	25.5	106	10.1	187	17.8	55	5.2	14	1.3	11	1.0	782	74.5
Economics Assistant	97	68	70.1	41	42.3	38	39.2	36	37.1	3	3.1	0	0.0	2	2.1	56	57.7
Psychology Aid & Tech.	625	361	57.8	106	17.2	61	9.8	78	12.5	13	2.1	4	0.6	11	1.8	519	83.0
Social Serv. Aid & Tech.	1,162	498	42.9	402	34.6	171	14.7	222	19.1	58	5.0	110	9.5	12	1.0	760	65.4
Social Sci. Student Trainee	60	31	51.7	29	48.3	14	23.3	20	33.3	6	10.0	1	1.7	2	3.3	31	51.7
TOTAL	22,804	6,882	30.2	3,235	14.2	1,485	6.5	2,042	9.0	565	2.5	323	1.4	305	1.3	19,569	85.8

FIELD: Anthropology

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 9-7

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	3,902	1,847	47.3	1,091	338	31.0
1960-61 thru 1969-70	16,264	8,729	53.7	3,093	1,142	36.9
1970-71	4,386	2,433	55.5	766	337	44.0
1971-72	5,147	2,802	54.4	818	363	44.4
1972-73	5,625	3,052	54.3	807	348	43.1
1973-74	6,002	3,329	55.5	885	388	43.8
1974-75	5,624	3,210	57.0	993	473	47.7
1975-76	5,188	3,980	57.4	937	454	48.4
1976-77	4,833	2,832	58.6	965	457	47.4
1977-78	4,300	2,589	60.2	856	427	49.9
1978-79	3,998	2,449	61.3	830	423	51.0
1979-80	3,606	2,258	62.6	832	453	54.4
1980-81	3,330	2,108	63.3	869	502	57.8
1981-82	3,069	1,945	63.4	826	408	49.4
TOTAL	75,274	42,563	56.5	14,568	6,513	44.7

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1983, National Research Council

TABLE 9-8

DOCTORAL DEGREES BY SEX, 1920-1983

Y E A R	TOTAL BOTH SEXES	WOMEN ONLY	% WOMEN
CY 1920 thru FY 1959*	773	148	19.1
FY 1960 thru FY 1969	1,013	218	21.5
FY 1970-72	717	197	27.5
FY 1973	324	96	29.6
FY 1974	381	125	32.8
FY 1975	385	137	35.6
FY 1976	428	157	36.7
FY 1977	386	136	35.2
FY 1978	399	163	40.9
FY 1979	383	168	43.9
FY 1980	369	174	47.2
FY 1981	369	152	41.2
FY 1982	333	138	41.4
FY 1983	373	175	46.9
TOTAL	6,633	2,184	32.9

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Anthropology

SOURCE: Report of the 1983 Survey of Departments, American Anthropological Association, 1983

TABLE 9-9

ANTHROPOLOGY FACULTY IN 201 DEPARTMENTS BY TENURE STATUS, RANK AND SEX, 1982-83

ACADEMIC RANK	TENURED			TENURE TRACK			NON-TENURE TRACK			TOTAL		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Professor	758	122	16.1	2	0	0.0	14	3	21.4	774	125	16.2
Associate Professor	537	136	25.3	18	6	33.3	22	5	22.7	577	147	25.5
Assistant Professor	66	20	30.3	281	105	37.4	92	50	54.4	439	175	39.9
Instructor	3	1	33.3	6	2	33.3	109	52	47.7	118	55	46.6
TOTAL	1,364	279	20.5	307	113	36.8	237	110	46.4	1,908	502	26.3

TABLE 9-10

ANTHROPOLOGY FACULTY IN 201 DEPARTMENTS BY RANK AND MINORITY STATUS, 1982-83

ACADEMIC RANK	Total	Indian	% I	Asian	% A	Black	% B	His-panic	% H	Min. Total	% M
Professor	774	15	1.9	12	1.6	12	1.6	10	1.3	49	6.3
Associate Professor	577	5	0.9	14	2.4	11	1.9	14	2.4	44	7.6
Assistant Professor	439	0	0.0	9	2.1	13	3.0	5	1.1	27	6.2
Instructor	118	1	0.9	0	0.0	2	1.7	7	5.9	10	8.5
TOTAL	1,908	21	1.1	35	1.8	38	2.0	36	1.9	130	6.8

FIELD: Sociology

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 9-11

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	85,039	48,441	57.0	6,115	1,871	30.6
1960-61 thru 1969-70	161,125	96,045	59.6	10,040	3,189	31.8
1970-71	33,662	19,959	59.3	1,809	677	37.4
1971-72	35,626	20,294	57.0	1,945	754	38.8
1972-73	35,994	20,249	56.3	1,923	777	40.4
1973-74	35,896	20,582	57.3	2,196	869	39.6
1974-75	31,817	18,487	58.1	2,112	808	38.3
1975-76	27,634	16,389	59.3	2,009	844	40.0
1976-77	24,713	15,034	60.8	1,830	812	44.4
1977-78	22,991	14,568	63.4	1,611	733	45.5
1978-79	20,545	13,390	65.2	1,415	670	47.4
1979-80	19,164	12,781	66.7	1,341	674	50.3
1980-81	17,272	12,025	69.6	1,240	650	52.4
1981-82	16,042	11,271	70.3	1,145	626	54.7
TOTAL	567,856	339,717	59.8	36,732	13,954	38.0

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-83, National Research Council

TABLE 9-12

DOCTORAL DEGREES BY SEX, 1920-1983

YEAR	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	2,788	441	15.8
FY 1960 thru FY 1969	2,532	442	17.5
FY 1970-72	1,725	344	19.9
FY 1973	599	154	25.7
FY 1974	645	184	28.5
FY 1975	680	210	30.9
FY 1976	734	223	30.4
FY 1977	725	237	32.7
FY 1978	610	224	36.7
FY 1979	632	232	36.7
FY 1980	602	231	38.4
FY 1981	603	242	40.1
FY 1982	568	214	37.7
FY 1983	525	216	41.1
TOTAL	13,968	3,594	25.7

* Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Anthropology and Sociology

SOURCE: Doctorate Recipients from United States Universities, Summary Reports 1975, 1977, 1978, 1980, and 1983, National Research Council

TABLE 9-13

PERCENT DISTIRBUTION OF DOCTORAL RECIPIENTS IN ANTHROPOLOGY AND SOCIOLOGY BY POSTDOCTORAL PRIMARY WORK ACTIVITY AND SEX, FY 1975 THRU FY 1983

POSTDOCTORAL PRIMARY WORK ACTIVITY	FY 1975		FY 1977		FY 1978		FY 1980		FY1983	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Reseach and Development	14.5	19.3	20.2	19.4	21.3	20.1	29.6	28.3	23.8	22.0
Teaching	75.5	72.6	66.2	69.6	62.8	67.0	56.5	55.7	47.7	56.5
Administration	2.0	1.9	3.3	3.2	4.1	3.6	6.5	5.7	10.9	5.4
Professional Services to Individuals	1.2	0.9	2.9	1.8	2.2	1.0	1.9	2.4	7.0	5.9
Other	0.4	1.4	0.9	0.9	1.1	1.5	*1.9	1.9	4.3	4.3
Activity Unknown	6.5	3.8	6.6	5.1	8.5	6.7	3.7	6.1	6.3	5.9

SOURCE: ASA FOOTNOTES, American Sociological Association, December 1982

TABLE 9-14

FACULTY IN GRADUATE SOCIOLOGY DEPARTMENTS BY RANK, SEX AND MINORITY GROUP 1970-74, 1981

Rank	Year	% Women	% Black	% Indian American	% Hispanic	% Asian American	Total Faculty
Professor	1970	4	2	—	—	—	900
	1971	4	2	—	—	—	1079
	1972	5.4	1.9	0.2	0.2	1.1	1029
	1973	5.8	2.5	0.1	0.4	2.1	1029
	1974	5.6	2.6	0.0	0.5	0.3	1028
	1981	9.1	2.8	0.0	0.7	3.7	1062
Associate Professor	1970	10	3	—	—	—	672
	1971	11	3	—	—	—	744
	1972	11.4	2.8	0.5	0.5	1.4	647
	1973	12.0	3.0	0.0	1.0	3.3	735
	1974	13.5	4.1	0.0	1.5	2.3	748
	1981	15.5	3.1	0.0	1.1	2.4	942
Assistant Professor	1970	13	2	—	—	—	996
	1971	12	3	—	—	—	1163
	1972	17.0	2.9	0.5	1.0	2.1	1024
	1973	20.0	3.7	0.3	0.9	2.6	1307
	1974	23.7	4.5	0.5	1.1	2.7	1171
	1981	35.3	6.4	0.1	1.7	1.2	762
Instructor	1970	16	9	—	—	—	212
	1971	29	8	—	—	—	106
	1972	34.3	9.1	0.0	1.0	0.0	99
	1973	36.6	6.0	0.0	0.9	1.2	336
	1974	37.1	10.3	0.0	0.7	0.4	272
	1981	51.9	14.8	0.0	1.9	0.0	54
TOTAL*	1970	9	3	—	—	—	2446
	1971	10	3	—	—	—	3249
	1972	12.4	3.4	0.5	0.6	1.4	2878
	1973	16.9	3.8	0.1	0.9	2.4	3726
	1974	18.5	4.9	0.2	1.0	2.2	3490
	1981	19.1	4.1	0.0	1.1	2.2	2820

*Lecturers included in total for 1970-1974

Data for 1972-74 taken from Joan R. Harris, "Women and Minorities in Sociology: Findings From Annual ASA Audit," *FOOTNOTES*, Volume 3, Number 1, January 1975.

FIELD: Psychology

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1983, National Research Council

TABLE 9-15

DOCTORATES AWARDED FROM 1920 TO 1983 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920–FY1972			FY1973–FY1977			FY1978–FY1981			FY1982			FY1983		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Psychology Subtotal	26,383	5,530	21.0	13,618	4,407	32.4	12,585	5,162	41.0	3,154	1,434	45.5	3,307	1,572	47.5
Clinical Psychology	6,764	1,533	22.7	5,582	1,309	23.5	4,484	1,880	41.9	1,165	514	44.1	1,209	572	47.3
Counseling	1,270	272	21.4	1,167	372	31.9	1,236	527	42.6	346	155	44.8	432	199	46.1
Developmental Psychology[1]	941	439	46.7	893	481	53.9	833	478	57.4	192	125	65.1	219	148	67.6
Educational Psychology	1,629	376	23.1	628	222	35.4	623	265	42.5	140	75	53.6	153	74	48.4
School Psychology[2]	393	111	28.2	593	256	43.2	560	274	48.9	166	86	51.8	121	72	59.5
Exper. Comparative Physiological Psy.[3]	3,076	415	13.5												
Experimental Psychology[3]	3,042	513	16.9	1,738	488	25.8	1,182	358	30.3	240	97	40.4	209	81	38.8
Comparative Psychology[3]	173	25	14.5	125	47	37.6	60	24	40.0	12	6	50.0	11	4	36.4
Physiological Psychology[3]	888	152	17.1	630	172	27.3	438	121	27.6	90	23	25.6	94	27	28.7
Human Engineering[4]	34	0	0.0												
Industrial & Organizational Pers. Psych.[5]	775	38	4.9	376	114	30.3	314	73	23.2	83	23	27.7	90	30	33.3
Personality Psychology[2]	447	112	25.1	296	107	36.1	176	80	45.5	326	17	47.2	32	9	28.1
Psychometrics	344	44	12.8	105	20	19.0	88	30	34.1	8	1	12.5	10	8	80.0
Social Psychology	1,945	423	21.7	1,063	312	29.4	788	320	40.6	179	85	47.5	191	103	53.9
Cognitive Psychology[6]													65	31	47.7
Quantitative Psychology[6]													14	4	28.6
Psychology, General[7]	4,100	941	23.0	1,091	368	33.7	999	417	41.7	240	103	42.9	287	130	45.3
Psychology, Other[7]	562	136	24.2	810	261	32.2	804	315	39.2	257	124	48.2	170	80	47.1

1 "Developmental and Gerontological" until 1983.
2 Added in 1960.
3 Experimental, Cdomparative & Physiological Psychology were broken out into three separate fields in 1962.
4 Dropped in 1962. Included now with Psychology, Other.
5 "Industrial and Personnel" until 1983.
6 Added in 1983.
7 Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "general" classification of their respective fields.

FIELD: Psychology

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 9-16

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	89,724	38,479	42.9	16,669	5,072	30.4
1960-61 thru 1969-70	181,611	75,916	41.8	27,052	9,063	33.5
1970-71	38,469	17,151	44.6	4,438	1,651	37.2
1971-72	43,421	20,154	46.4	5,293	2,033	38.4
1972-73	48,096	22,986	47.8	5,882	2,367	40.2
1973-74	52,256	26,407	50.5	6,616	2,630	39.8
1974-75	51,436	27,103	52.7	7,104	3,045	42.9
1975-76	50,363	27,376	54.3	7,859	3,671	46.7
1976-77	47,373	36,820	56.6	8,301	3,988	48.0
1977-78	45,057	26,540	58.9	3,194	4,263	52.0
1978-79	43,012	26,363	61.3	8,031	4,343	54.1
1979-80	42,513	26,923	63.3	7,861	4,464	56.8
1980-81	40,833	26,538	65.0	7,998	4,640	58.0
1981-82	41,031	27,408	66.8	7,791	4,582	58.8
TOTAL	815,195	416,164	51.1	129,089	55,813	43.2

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1983, National Research Council

TABLE 9-17

DOCTORAL DEGREES BY SEX, 1920-1983

YEAR	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	9,157	1,692	18.5
FY 1960 thru FY 1969	10,960	2,264	20.7
FY 1970 thru FY 1972	6,266	1,574	25.1
FY 1973	2,444	716	29.3
FY 1974	2,587	791	30.6
FY 1975	2,749	873	31.8
FY 1976	2,878	946	32.9
FY 1977	2,960	1,081	36.5
FY 1978	3,049	1,123	36.8
FY 1979	3,081	1,257	40.8
FY 1980	3,098	1,310	42.3
FY 1981	3,357	1,472	43.9
FY 1982	3,154	1,434	45.5
FY 1983	3,307	1,572	47.5
TOTAL	**59,047**	**18,105**	**30.7**

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Psychology

SOURCE: "Service Providers in Psychology," Results of the 1982 APA Human Resources Survey, American Psychologist, American Psychological Association, Vol. 38, No. 12, December 1983

TABLE 9-18

NUMBER AND PERCENT OF PSYCHOLOGISTS PROVIDING HEALTH SERVICES BY TYPE OF PROVIDER, DEGREE LEVEL, SEX AND ETHNICITY, 1982

SEX/ ETHNICITY	Health Services Only				Both Health and Educational Services				Educational Services Only			
	Doctoral		Master's		Doctoral		Master's		Doctoral		Master's	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
TOTAL	10,209	(100.0)	1,217	(100.0)	5,907	(100.0)	730	(100.0)	2,099	(100.0)	618	(100.0)
SEX												
Male	6,962	(68.2)	673	(55.3)	4,142	(70.1)	413	(56.6)	1,440	(68.6)	270	(43.7)
Female	3,248	(31.8)	543	(44.7)	1,765	(29.9)	317	(43.4)	659	(31.4)	348	(56.3)
ETHNICITY												
White	9,810	(96.1)	1,179	(96.9)	5,631	(95.3)	706	(96.7)	2,011	(95.8)	573	(92.8)
Black	120	(1.2)	7	(0.5)	96	(1.6)	14	(1.9)	35	(1.7)	18	(3.0)
Hispanic	98	(1.0)	10	(0.9)	48	(0.8)	6	(0.8)	14	(0.7)	9	(1.4)
Asian	102	(1.0)	19	(1.5)	54	(0.9)	0	(0.0)	34	(1.6)	5	(0.8)
American Indian	19	(0.2)	0	(0.0)	9	(0.2)	1	(0.1)	3	(0.1)	2	(0.3)
Not Specified	60	(0.6)	2	(0.1)	70	(1.2)	3	(0.5)	2	(0.1)	11	(1.8)
MEDIAN AGE	39.5 yrs		39.1 yrs		40.7 yrs		41.7 yrs		46.1 yrs		46.3 yrs	

Note: Column percentages are given. The application of fractional weights and rounding may result in total percentages and numbers that differ slightly from the sums of subgroup percentages and numbers. In each case, numbers have been rounded to the nearest whole respondent.

SOURCE: Summary Report of 1983-84 Survey of Graduate Departments of Psychology, American Psychological Association, March 1984

TABLE 9-19

CHARACTERISTICS OF FACULTY IN U.S. GRADUATE DEPARTMENTS OF PSYCHOLOGY BY SEX AND RACE/ETHNICITY, 1983-84

FACULTY CHARACTERISTICS	Ph.D. DEPTS.		MASTER'S DEPTS.		ALL DEPTS.	
	No.	V %	No.	V %	No.	V %
NUMBER OF DEPARTMENTS	221	-	127	-	348	-
TOTAL FACULTY	5,513	100.0	1,819	100.0	7,332	100.0
Men	4,261	77.3	1,332	73.2	5,593	76.3
Women	1,223	22.2	482	26.5	1,705	23.3
Not Specified	29	0.5	5	0.3	34	0.5
BY RACE						
White	5,178	93.9	1,731	95.2	6,909	94.2
Black	149	2.7	44	2.4	193	2.6
Hispanic	68	1.2	14	0.8	82	1.1
Asian	51	0.9	20	1.1	71	1.0
American Indian	9	0.2	2	0.1	11	0.2
Not Specified	58	1.1	8	0.4	66	0.9

FIELD: Economics

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 9-20

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S			MASTER'S*		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	113,153	11,039	9.8	9,218	996	10.8
1960-61 thru 1969-70	129,286	12,254	9.5	14,411	1,509	10.5
1970-71	17,137	1,923	11.2	1,997	262	13.1
1971-72	15,336	1,817	11.8	2,225	284	12.8
1972-73	14,867	2,059	13.9	2,231	283	12.7
1973-74	14,418	2,121	14.7	2,141	303	15.2
1974-75	14,118	2,439	17.3	2,133	325	15.2
1975-76	14,854	2,914	19.6	2,093	334	15.9
1976-77	15,296	3,503	22.9	2,158	383	17.7
1977-78	15,746	3,933	25.0	1,997	396	19.8
1978-79	16,534	4,555	27.5	1,960	392	20.0
1979-80	17,954	5,430	30.2	1,823	382	21.0
1980-81	18,753	5,717	30.5	1,911	444	23.2
1981-82	19,876	6,452	32.5	1,964	483	24.6
TOTAL	437,328	66,156	15.1	48,262	6,776	14.0

*Does not include Agricultural Economics

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-83, National Research Council

TABLE 9-21

DOCTORAL DEGREES BY SEX, 1920-1983

Y E A R	Total Both Sexes	Women Only	% Women
CY 1920 th r FY 1959*	4,872	331	5.6
FY 1960 thru FY 1969	5,282	245	4.6
FY 1970-72	2,480	162	6.8
FY 1973	907	57	6.3
FY 1974	833	73	8.8
FY 1975	867	84	9.7
FY 1976	854	92	10.7
FY 1977	809	71	8.8
FY 1978	778	91	11.7
FY 1979	780	104	13.3
FY 1980	745	101	13.6
FY 1981	807	100	12.4
FY 1982	735	98	13.3
FY 1983	792	129	16.3
TOTAL	22,541	1,738	7.7

* Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Economics

SOURCE: Report of the Committee on the Status of Women in the Economics Profession by Elizabeth E. Bailey, January 1982, and Report of the Committee on the Status of Women in the Economics Profession by Barbara Bergmann, AEA Papers and Proceedings, May 1984, American Economics Association

TABLE 9-22

DISTRIBUTION OF ACTIVITIES OF NEW PH.D. RECIPIENTS BY SEX AND TYPE OF DEPARTMENT, ACADEMIC YEAR 1979-80 THRU 1982-83

	ALL DEPARTMENTS				CHAIRMAN'S GROUP*				OTHER PH.D. DEPARTMENTS			
	1979-1980		1982-1983		1979-1980		1982-1983		1979-1980		1982-1983	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ALL PH.D.'s	**464**	**100.0**	**772**	**100.0**	**337**	**100.0**	**353**	**100.0**	**137**	**100.0**	**419**	**100.0**
Education	223	48.1	422	54.7	174	51.6	194	55.0	59	43.1	228	54.4
Government	45	9.7	67	8.7	33	9.8	31	8.8	12	8.8	36	8.6
Business, Banking, Research	53	11.4	117	15.2	41	12.2	55	15.6	12	8.8	62	14.8
International Employment Outside U.S.	102	22.0	113	14.6	54	16.0	51	14.4	48	35.0	62	14.8
Other	41	8.8	53	6.9	35	10.4	22	6.2	6	4.3	31	7.4
MALE PH.D.'s	**423**	**100.0**	**664**	**100.0**	**301**	**100.0**	**305**	**100.0**	**122**	**100.0**	**359**	**100.0**
Education	204	48.2	357	53.8	155	51.5	164	53.8	49	40.2	193	53.8
Government	41	9.7	57	8.6	30	10.0	27	8.9	11	9.0	30	8.4
Business, Banking, Research	51	12.1	103	15.5	39	13.0	48	15.7	12	9.8	55	15.3
International Employment Outside U.S.	93	22.0	107	16.1	49	16.3	49	16.1	44	36.1	58	16.2
Other	34	8.0	40	6.0	28	9.3	17	5.6	6	4.9	23	6.4
FEMALE PH.D.'s	**41**	**100.0**	**108**	**100.0**	**36**	**100.0**	**48**	**100.0**	**15**	**100.0**	**60**	**100.0**
Education	19	46.3	65	60.2	19	52.8	30	62.5	10	66.7	35	58.3
Government	4	9.7	10	9.3	3	8.3	4	8.3	1	6.7	6	10.0
Business, Banking, Research	2	4.9	14	13.0	2	5.6	7	14.6	-	-	7	11.7
International Employment Outside U.S.	9	22.0	6	5.6	5	13.9	2	4.2	4	26.6	4	6.7
Other	7	17.1	13	12.0	7	19.4	5	10.4	-	-	8	13.3

*Consists of 65 departments that focus on research and training of PH.D.'s in economics.

FIELD Economics

SOURCE: Report of the Committee on the Status of Women in the Economics Profession by Elizabeth E. Bailey, January 1982, and Report of the Committee on the Status of Women in the Economics Profession by Barbara Bergmann, AEA Papers and Proceedings, May 1984, American Economics Association

TABLE 9-23

DISTRIBUTION OF FULL-TIME FACULTY BY TYPE OF INSTITUTION, ACADEMIC RANK AND SEX, 1979-80 THRU 1982-83

	CHAIRMAN's GROUP*						OTHER Ph.D.						ONLY M.A. DEPARTMENTS						ONLY B.A. DEPARTMENTS					
	1979-80			1982-83			1979-80			1982-83			1979-80			1982-83			1979-80			1982-83		
		WOMEN			WOMEN			WOMEN			WOMEN			WOMEN			WOMEN			WOMEN			WOMEN	
	TOTAL	No.	%	TOTAL	No.	%	TOTAL	No.	%	TOTAL	No.	%	TOTAL	No.	%	TOTAL	No.	%	TOTAL	No.	%	TOTAL	No.	%
Existing																								
Professor	530	9	1.7	634	14	2.2	448	9	2.0	921	25	2.7	239	13	5.4	223	19	8.5	237	17	7.2	349	26	7.4
Associate Prof.	188	10	5.3	256	18	7.0	300	10	3.3	470	30	6.4	230	25	10.9	319	89	27.9	251	8	3.2	313	19	6.1
Assistant Prof.	248	34	13.7	343	44	12.8	242	32	13.2	512	68	13.3	214	26	12.2	215	56	26.0	287	34	11.9	401	66	16.5
Instructor	51	12	23.5	52	11	21.2	53	4	7.5	80	19	23.8	29	7	24.1	111	15	13.5	96	20	20.8	119	25	21.0
Other	21	3	14.3	40	7	17.5	22	3	13.6	50	7	14.0	5	4	80.0	117	94	80.3	13	1	7.7	39	4	10.5
New Hires																								
Professor	8			5	0	0.0	4			6	0	0.0	4	1	25.0	3	0	0.0	3	1	33.3	8	0	0.0
Associate Prof.	7	1	14.3	11	1	9.1	10			5	2	40.0	5	1	20.0	4	0	0.0	11	1	9.1	14	0	0.0
Assistant Prof.	59	7	11.9	58	7	12.1	47	5	10.6	90	13	14.4	49	5	10.2	36	5	13.9	66	8	12.1	76	16	21.1
Instructor	19			16	2	12.5	25	4	16.0	33	5	15.2	15	3	20.0	9	3	33.3	54	15	27.8	19	11	57.9
Other	4			4	1	25.0				7	1	14.3	4	3	75.0	6	3	50.0	3	1	33.3	13	0	0.0
Promoted to Rank (1978-79 & 1981-82)																								
Professor	14	1	7.1	21	1	4.8	24			31	2	6.5	15	1	6.7	16	1	6.3	18	1	5.6	19	2	10.5
Associate Prof.	27	3	11.1	31	4	12.9	29	3	10.3	45	7	15.6	31	7	22.6	18	4	22.2	25			31	3	9.7
Assistant Prof.	4			3	0	0.0	8	2	25.0	9	0	0.0	5	2	40.0	2	1	50.0	12	3	25.0	21	4	19.0
Tenured at Rank (1978-79 & 1981-82)																								
Professor	1			2	0	0.0	2			4	0	0.0				2	0	0.0				41	35	85.4
Associate Prof.	18	1	5.6	22	3	13.6	20	1	5.0	32	3	9.4	9	1	11.1	12	3	25.0	22	1	4.6	38	12	31.6
Assistant Prof.	2			2	1	50.0	2			3	2	66.7	6	1	16.7	4	1	25.0	6			17	1	5.9
Other				2	0	0.0				2	0	0.0				0	0	0.0				1	0	0.0
Not Rehired																								
Professor	20			27	0	0.0	5			35	1	2.9	10			9	2	22.2	8			9	1	11.1
Associate Prof.	13	1	7.7	10	1	10.0	12	1	8.3	17	1	5.9	8			6	1	16.7	10			6	1	16.7
Assistant Prof.	29	5	17.2	40	2	5.0	23	2	8.7	55	5	9.1	32	5	15.6	27	8	29.6	45	4	8.9	46	6	13.0
Instructor	5			10	3	30.0	12	3	25.0	21	5	23.8	9	2	22.2	2	1	50.0	21	2	9.5	21	4	19.0
Other	4			6	1	16.7	1			6	1	16.7	1	1	100.0	0	0	0.0	3			9	3	33.3

* Consists of 65 departments that focus on research and training of Ph.D.'s in economics.

FIELD: Economics

SOURCE: Report of the Committee on the Status of Women in the Economics Profession by Elizabeth E. Bailey, January 1982 and Report of the Committee on the Status of Women in the Economics Profession by Barbara R. Bergmann, AEA Papers and Proceedings, May 1984, American Economics Association.

TABLE 9-24

PREVIOUS ACTIVITY OF NEW HIRES AND CURRENT ACTIVITY OF THOSE NOT REHIRED BY TYPE OF INSTITUTION AND SEX, 1979-80 AND 1982-83

	PREVIOUS ACTIVITY OF NEW HIRES								CURRENT ACTIVTY OF NOT REHIRED							
	1979-80				1982-83				1979-80				1982-83			
	MEN		WOMEN		MEN		WOMEN		MEN		WOMEN		MEN		WOMEN	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Chairman's Group*	90	100.0	8	100.0	88	100.0	18	100.0	67	100.0	7	100.0	76	100.0	3	100.0
Faculty	21	23.4	3	37.5	20	22.7	4	22.2	37	55.2	2	28.6	36	47.4	3	100.0
Student	56	62.2	5	62.5	59	67.1	12	66.7					2	2.6	0	0.0
Government	3	3.3			3	3.4	1	5.6	5	7.5	2	28.6	12	15.8	0	0.0
Business, Banking, Research	4	4.4			4	4.6	0	0.0	11	16.4	2	28.6	15	19.7	0	0.0
Other	6	6.7			2	2.3	1	5.6	14	20.9	1	14.2	11	14.5	0	0.0
Other Ph.D	70	100.0	17	100.0	137	100.0	31	100.0	42	100.0	9	100.0	108	100.0	9	100.0
Faculty	23	32.9	3	17.6	40	29.2	7	22.6	20	47.6	4	44.5	57	52.8	7	77.8
Student	40	57.1	14	82.5	83	60.6	20	64.5	2	4.8			6	5.6	1	11.1
Government	1	1.4			7	5.1	2	6.5	5	11.9	1	11.1	13	12.0	1	11.1
Business, Banking, Research	1	1.4			4	2.9	1	3.2	7	16.7	2	22.2	15	13.8	0	0.0
Other	5	7.4			3	2.2	1	3.2	8	19.0	2	22.2	17	15.7	0	0.0
M.A. Departments	82	100.0	18	100.0	52	100.0	13	100.0	55	100.0	12	100.0	41	100.0	8	100.0
Faculty	31	37.7	3	16.7	20	38.5	3	23.1	24	43.6	5	41.7	23	56.7	0	0.0
Student	32	39.0	9	50.0	20	38.5	9	69.2	16	18.2	2	16.7	3	7.3	1	12.5
Government	3	3.7	2	11.1	3	5.8	0	0.0	3	5.5			0	0.0	0	0.0
Business, Banking, Research	13	15.9	3	16.7	3	5.8	0	0.0	7	12.7	1	8.3	8	19.5	1	12.5
Other	3	3.7	1	5.5	6	11.5	1	7.7	11	20.0	4	33.3	7	17.1	6	75.0
B.A. Departments	140	100.0	34	100.0	158	100.0	44	100.0	72	100.0	5	100.0	77	100.0	14	100.0
Faculty	44	31.4	9	26.5	56	35.4	8	18.2	41	56.9	3	60.0	35	45.5	3	21.4
Student	66	47.2	21	61.7	74	46.8	27	61.4	3	4.2	1	20.0	6	7.8	2	14.3
Government	3	2.2			5	3.2	0	0.0	5	7.0			5	6.5	0	0.0
Business, Banking, Reseach	20	14.0	2	5.9	18	11.4	7	15.9	14	19.4			10	13.0	2	14.3
Other	7	5.0	2	5.9	5	3.2	2	4.6	9	12.5	1	20.0	21	27.3	7	50.0

* Consists of 65 departments that focus on research and training of Ph.D.'s in economics.

FIELD: Political Science

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 9-25

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	74,124	13,777	18.6	8,103	1,233	15.2
1960-61 thru 1969-70	154,982	33,327	21.5	14,381	2,764	19.2
1970-71	27,636	5,564	20.1	2,318	479	21.4
1971-72	28,317	5,338	18.8	2,451	502	20.5
1972-73	30,246	5,919	19.6	2,399	480	20.0
1973-74	30,932	6,199	20.4	2,448	456	18.6
1974-75	29,314	6,610	22.5	2,333	476	20.4
1975-76	28,515	7,205	25.3	2,192	473	21.6
1976-77	26,411	7,444	28.2	2,222	504	22.6
1977-78	26,245	8,168	31.1	2,070	547	26.4
1978-79	25,817	8,620	33.4	2,038	558	27.4
1979-80	25,658	9,212	35.9	1,938	515	26.6
1980-81	24,977	9,181	36.8	1,875	533	28.4
1981-82	25,658	9,775	38.1	1,954	610	31.2
TOTAL	558,832	136,339	24.4	48,722	10,130	20.8

SOURCE: Doctorates Awarded from 1920 to 1977 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-83, National Research Council

TABLE 9-26

DOCTORAL DEGREES BY SEX, 1920-1983

Y E A R	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	3,017	203	6.7
FY 1960 thru FY 1969	3,122	257	8.2
FY 1970-72	2,008	223	11.1
FY 1973	780	93	11.9
FY 1974	775	115	14.8
FY 1975	749	121	16.2
FY 1976	628	106	16.9
FY 1977	613	102	16.6
FY 1978	603	118	19.6
FY 1979	522	95	18.2
FY 1980	505	102	20.2
FY 1981	445	96	21.6
FY 1982	459	106	23.1
FY 1983	397	83	20.9
TOTAL	14,623	1,820	12.4

* Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Political Science

SOURCE: "Ph.D. Enrollments Continue to Decline", by Robert J-P. Hauck, PS, Winter, 1984, American Political Science Association

TABLE 9-27

FIRST-TIME ENROLLMENTS IN Ph.D. PROGRAMS IN POLITICAL SCIENCE, FALL 1974-1983

YEAR	TOTAL	WOMEN		BLACK	
		No.	%	No.	%
Fall, 1983	838	230	27.4	51	6.1
Fall, 1982	772	208	26.9	39	5.1
Fall, 1981	1,042	299	28.7	76	7.3
Fall, 1980	1,068	301	28.2	104	9.7
Fall, 1979	1,100	305	27.7	101	9.2
Fall, 1978	1,051	255	24.3	102	9.7
Fall, 1977	1,182	270	22.8	111	9.4
Fall, 1976	1,064	274	25.8	100	9.4
Fall, 1975	1,174	270	23.0	129	11.0
Fall, 1974	1,443	342	23.7	131	9.1

SOURCE: "Ph.D. Enrollments Continue to Decline", by Robert J-P. Hauck, PS, Winter, 1984, American Political Science Association

TABLE 9-28

TOTAL ENROLLMENTS IN Ph.D. PROGRAMS IN POLITICAL SCIENCE, 1974-75 - 1983-84

YEAR	TOTAL	WOMEN		BLACK		FOREIGN	
		No.	%	No.	%	No.	%
1983-84	4,171	1,105	26.5	207	5.0	1,075	25.8
1982-83	*	*	*	*	*	*	*
1981-82	5,491	1,505	27.4	319	5.8	1,181	21.5
1980-81	5,756	1,415	24.6	373	6.5	1,212	21.1
1979-80	5,888	1,384	23.5	406	6.9	1,146	19.5
1978-79	5,742	1,258	21.9	432	7.5	948	16.5
1977-78	5,737	1,278	22.3	413	7.2	819	14.3
1976-77	5,462	1,209	22.1	402	7.4	813	14.9
1975-76	6,150	1,475	24.0	435	7.1	*	*
1974-75	6,150	1,250	20.3	435	7.1	*	*

*Figures not available.

FIELD: Political Science

SOURCE: "Finding Jobs: Placement of Political Scientists, 1982-83," by Robert J.P. Hauck, PS, Spring 1984, American Political Science Association

TABLE 9-29

PLACEMENT SUCCESS OF POLITICAL SCIENTISTS BY FIELDS OF SPECIALIZATION AND SEX, 1980-1983

	Total				Men				Women			
	1980	81	82	83	1980	81	82	83	1980	81	82	83
Placement Success[a]												
American Government	74	85	71	99	75	85	73	100	71	83	66	96
Public Policy	64	94	81	60	61	100	87	54	78	75	67	75
Comparative/Area Studies	55	59	52	73	55	60	46	75	55	56	74	67
International Relations	64	57	52	66	62	54	61	75	80	79	61	31
Public Administration	97	91	100	73	96	100	100	62	100	80	67	100
Political Theory	57	68	42	43	47	65	41	45	65	78	57	30
Methodology	50	81	88	80	60	83	100	80	50	100	100	–
Other	100	100	100	35	100	43	100	29	100	100	100	67
Percentage of Those Placed[b]												
American Government	29	30	30	30	28	28	30	28	32	35	32	40
Public Policy	7	8	10	11	6	9	9	9	8	7	9	20
Comparative/Area Studies	22	21	20	19	22	20	18	20	21	22	23	15
International Relations	17	13	19	14	15	13	19	16	14	13	18	5
Public Administration	7	10	25	10	7	11	5	9	6	5	9	10
Political Theory	11	12	9	9	10	13	10	10	13	11	5	5
Methodology	1	3	2	1	1	3	3	1	0	4	–	–
Other	7	2	5	6	8	2	5	5	5	2	5	5

[a]Placement success measures number placed in a field as a percentage of total candidates in each of the respective fields.

[b]Percentage of those placed measures the total number placed in a particular field as a percentage of the total number placed in all fields.

TABLE 9-30

PLACEMENT OF POLITICAL SCIENTISTS BY TYPE OF HIRING INSTITUTION AND SEX, 1980-1983 (%)

	Total				Men				Women			
	1980	81	82	83	1980	81	82	83	1980	81	82	83
Ph.D. department	31	36	29	34	32	36	29	32	38	35	31	40
M.A. department	17	18	20	18	16	18	20	18	20	13	18	15
Undergraduate political science	22	25	25	27	21	24	26	27	26	33	21	29
Undergraduate social science	4	2	4	1	4	2	3	–	5	–	6	8
2-year college	2	2	1	1	1	2	3	2	2	1	6	–
Nonacademic	24	18	24	19	24	18	20	21	19	18	17	4
Total	100	101	99	100	99	100	101	100	100	100	99	96

FIELD: Political Science

SOURCE: "Finding Jobs: Placement of Political Scientists, 1982-83," by Robert J.P. Hauck, PS, Spring 1984, American Political Science Association

TABLE 9-31

PLACEMENT OF JOB CANDIDATES IN POLITICAL SCIENCE, 1980-1983

	Total	Men	Women
Number of Firm Candidates			
1980	779	630	149
1981	667	596	101
1982	611	485	126
1983	523	390	133
Number Placed			
1980	560	451	109
1981	511	437	75
1982	379	298	81
1983	414	326	88
Placement Success (%)			
1980	68	68	68
1981	73	73	73
1982	62	61	64
1983	79	79	66
Percent in Temporary Positions			
1980	33	32	35
1981	28	28	28
1982	36	37	36
1983	33	32	39

TABLE 9-32

DEGREE COMPLETION AND PLACEMENT SUCCESS OF POLITICAL SCIENTISTS 1980-1983 (%)

	ABD				Ph.D.			
	1980	81	82	83	1980	81	82	83
Placement Success[a]								
Total	63	66	55	54	74	81	66	87
Men	61	63	54	53	75	83	63	87
Women	70	79	58	57	72	70	79	88
Percentage of Those Placed[b]								
Total	46	44	41	34	54	56	59	66
Men	43	41	40	32	57	59	60	68
Women	57	54	45	43	43	46	55	57

[a]Placement success measures number placed within each category as a percentage of the total candidates within each category.

[b]Percentage of those placed measures the number placed within each catagory as a percentage of total number placed in all categories.

CHAPTER 10

ARTS, HUMANITIES AND EDUCATION

ARTS AND HUMANITIES

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EDUCATION

Degrees Awarded.....264

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FIELD: Arts and Humanities

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1983, National Research Council

TABLE 10-1

DOCTORATES AWARDED FROM 1920 TO 1983 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978-FY1981			FY1982			FY1983		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Arts & Humanities Subtotal	60,012	12,574	21.0	24,858	8,119	32.7	15,986	6,267	39.2	3,560	1,510	42.4	3,494	1,530	43.8
History, Am., European, Gen. & Other [1]	15,556	2,076	13.3	5,480	1,066	19.5	3,017	790	26.2	663	191	28.8	4,197	192	4.6
History & Philosophy of Sci. [2]	74	10	13.5	154	68	44.2	100	29	29.0	29	10	34.5	13	7	53.8
Amer. & Eng. Lang. & Lit. [2]	11,782	2,715	23.0												
American Lang. & Lit. [2]	779	235	30.2	1,229	460	37.4	774	367	47.4	154	71	46.1	173	101	58.4
English Lang. & Lit. [3]	3,867	1,236	32.0	5,134	2,101	40.9	2,931	1,430	48.8	617	336	54.5	541	275	50.8
German Lang. & Lit. [3]	1,142	335	29.3	847	394	46.5	407	219	53.8	74	45	60.8	77	47	61.0
French Lang. & Lit.	1,529	661	43.2	1,239	771	62.2	699	484	69.2	119	72	60.5	121	86	71.1
Spanish, Portuguese Lang. & Lit.	1,338	451	33.8	1,151	496	43.1	683	367	53.7	178	102	57.3	161	91	56.5
Linguistics [3]	1,502	358	23.8	910	343	37.7	688	295	42.9	191	90	47.1	164	86	52.4
Italian Lang. & Lit. [3]	108	34	31.5	117	43	36.8	69	34	49.3	17	9	52.9	22	10	45.5
Russian Lang. & Lit. [3]	273	85	31.1	394	123	31.2	153	85	55.6	24	16	66.7	24	13	54.2
Slavic Lang. & Lit. [3]	48	11	22.9										9	4	44.4
Other Modern Languages [4]	5,161	1,330	25.8	552	161	29.2	408	151	37.0	79	34	43.0	90	35	38.9
Classical Lang. & Lit.	2,236	682	30.5	405	142	35.1	239	84	35.1	60	18	30.0	48	25	52.1
Philosophy	5,133	631	12.3	1,909	310	16.2	1,397	213	19.4	251	59	23.5	242	64	26.4
Speech & Debate [5]	4,357	717	16.5	670	188	28.1	223	83	37.2	38	11	28.9	164	86	52.4
Archeology	314	114	36.3	109	48	44.0	120	55	45.8	21	13	61.9	30	19	63.3
Art, Fine & Applied [6]	889	246	27.7	20	4	20.0									
Art, History & Criticism [6]	346	155	44.8	678	351	51.8	618	392	63.4	138	95	68.8	150	101	67.3
Music	2,501	348	13.9	1,866	413	22.1	1,557	440	28.3	402	123	30.6	391	122	31.2
Humanities, General [7]	415	57	13.7	117	46	39.3	80	41	51.3	28	14	50.0	17	7	41.2
Humanities, Other [3]	660	176	26.7	630	271	43.0	202	91	45.0	52	26	50.0	50	22	44.0
American Studies [8]				242	79	32.6	280	134	47.9	64	30	46.9	98	45	45.9
Religion [9]				888	289	32.5	553	115	20.8	150	25	16.7	173	34	19.7
Comparative Literature [10]				308	165	53.6	450	258	57.3	118	74	62.7	124	72	58.1
Theatre & Theatre Critic [11]							293	108	36.9	93	46	49.5	107	44	78.9

[1] Added in 1970. [2] In 1968, this specification was separated. [3] Shown as "Modern Foreign Language, Unspecified" until 1965; as "Other Languages" in 1979, and separated in 1983. [4] Name changed from "Foreign Language & Lit., Classical" in 1966. [5] Originally specified as "Speech" then "Speech as a Dramatic Art." In 1962, "Dramatic Arts" was added. [6] In 1968, "Art, Fine & Applied" was broken out into "Art, Applied" & "Art, History & Criticism". [7] Subfields were not specified until FY 1958. [8] Added in 1975. [9] Added in 1973. [10] Added in 1976. [11] Added in 1979.

FIELD: Linguistics

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-82
U.S. Office of Education (NCES)

TABLE 10-2

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1981-82

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru + 1959-60	171	76	44.4	287	113	39.4
1960-61 thru 1969-70	1,127	575	51.0	2,066	859	42.8
1970-71	254	171	67.3	352	179	50.8
1971-72	296	186	62.8	373	199	53.4
1972-73	443	290	65.5	452	228	50.4
1973-74	431	315	73.1	455	248	54.5
1974-75	434	305	70.3	506	279	55.1
1975-76	534	371	69.5	523	313	59.8
1976-77	564	399	70.7	552	326	59.1
1977-78	596	408	68.5	522	313	60.0
1978-79	585	408	69.7	503	297	59.0
1979-80	553	418	75.6	522	315	60.3
1980-81	551	408	74.0	498	307	61.6
1981-82	534	376	70.4	516	305	59.1
TOTAL	7,073	4,706	66.5	8,127	4,286	52.7

+ Includes data beginning in 1955-56 when linquistics was identified as a separate field.

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1983, National Research Council

TABLE 10-3

DOCTORAL DEGREES BY SEX, 1920-1983

YEAR	TOTAL BOTH SEXES	WOMEN ONLY	% WOMEN
CY 1920 thru FY 1959*	293	68	23.2
FY 1960 thru FY 1969	738	167	22.6
FY 1970-72	471	123	26.1
FY 1973	207	65	31.4
FY 1974	167	68	40.7
FY 1975	194	70	36.1
FY 1976	152	70	46.1
FY 1977	190	73	38.4
FY 1978	175	65	37.1
FY 1979	155	77	49.7
FY 1980	182	75	41.2
FY 1981	176	78	44.3
FY 1982	191	90	47.1
FY 1983	164	86	52.4
TOTAL	3,455	1,175	34.0

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Education

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1983, National Research Council

TABLE 10-4

DOCTORATES AWARDED FROM 1920 TO 1983 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978-FY1981			FY1982			FY1983		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
EDUCATION, TOTAL[1]	69,377	13,878	20.0	37,033	11,136	30.1	29,625	12,861	43.4	7,226	3,525	48.8	7,147	3,604	50.4
Pre-Elementary Education[10]													63	48	76.2
Elementary Education, General[2]	2,644	1,096	41.5	1,240	703	56.7	728	507	69.6	149	100	67.1	111	85	76.6
Junior High Education[10]													1		
Secondary Education, General[2]	2,212	375	17.0	973	268	27.5	591	246	41.6	104	53	51.0	87	48	55.2
Higher Education[3]	522	96	18.4	3,053	729	23.9	2,648	1,036	39.1	651	285	43.8	632	304	48.1
Adult Ed. & Continuing Ed.[3]	251	52	20.7	779	191	24.5	837	351	41.9	257	133	51.8	221	110	49.8
Special Foundations[4]	2,361	535	22.7	1,056	308	29.2	900	325	36.1	213	91	42.7	142	61	43.0
Educational/School Psychology[12]	3,165	924	29.2	2,402	952	39.6	1,779	873	49.2	448	238	53.1	273	211	77.3
Ed. Testing, Evaluation, Meas.[12]	691	110	15.9	542	150	27.7	380	155	40.8	94	39	41.5	51	20	39.2
Ed. Statistics & Research[5]	547	188	34.4	3,800	1,446	38.1	3,324	1,638	49.3	808	463	57.3	86	40	46.5
Educational Admin. & Supvr.[4]	12,610	1,053	8.4	7,544	1,188	15.7	6,096	1,911	31.5	1,464	540	36.9	1,619	632	39.0
Student Counseling & Per. Serv.[4]	4,909	1,046	21.3	3,412	1,142	33.5	2,309	1,031	44.7	539	256	47.5	502	252	50.2
Special Education[4]	1,918	535	27.9	1,499	619	41.3	1,286	734	57.1	347	237	68.3	349	229	65.6
Educational Media[4]	624	67	10.7	449	78	17.4	334	106	31.7	76	32	42.1	88	35	39.8
Teaching Field-Agriculture[2]	459	8	1.7	138	2	1.4	140	8	5.7	35	3	8.6	47	8	17.0
Teaching Field-Arts[6]	369	103	27.9	273	106	38.8	206	112	54.4	55	34	61.8	58	32	55.2
Teaching Field-Business[6]	685	201	29.3	408	142	34.8	230	98	42.6	44	26	59.1	62	28	45.2
Teaching Field-English[6]	563	164	29.1	431	204	47.3	297	173	58.2	67	38	56.7	76	50	65.8
Teaching Field-Foreign Lang.[6]	168	49	29.2	152	73	48.0	139	76	54.7	31	15	48.4	25	10	40.0
Teaching Field-Health[10]													99	57	57.6
Teaching Field-Home Economics[6]	256	248	96.9	169	164	97.0	107	105	77.0	33	33	100.0	25	24	96.0
Teaching Field-Ind. Arts[6]	527	2	0.4	257	5	1.9	126	5	4.0	39	3	7.7	19	2	10.5
Teaching Field-Mathematics[6]	908	150	16.5	546	140	25.6	278	112	40.3	50	20	40.0	62	40	64.5
Teaching Field-Music[6]	906	125	13.8	539	131	24.3	360	122	33.9	103	44	42.7	112	41	36.6
Teaching Field-Nursing[11]							64	64	100.0	25	24	96.0	17	17	100.0
Speech Education[7]				55	27	49.1	58	38	65.5	12	8	66.7	2	2	100.0
Reading Education[8]				246	171	69.5	647	520	80.4	152	111	73.0	169	120	71.0
Physical Ed., Health & Rec.[2]	2,861	783	27.4	1,723	513	29.8	1,402	551	39.3	351	145	41.3	236	106	44.9
Science Education[6]	1,574	306	19.4	656	123	18.8	397	111	28.0	86	28	32.6	78	25	32.1
Social Science Education[6]	500	90	18.0	289	69	23.9	210	73	34.8	29	11	37.9	39	22	56.4
Trade & Industrial Education[6]	461	26	5.6	882	166	18.8	841	301	35.8	191	78	40.8	138	55	39.9
Other Teaching Fields[9]	750	309	41.2	569	325	57.1	162	92	56.8	96	78	81.2	64	30	46.1
Education, General[4]	24,816	4,896	19.7	1,730	587	33.9	1,693	774	45.7	421	223	53.0	347	175	50.4
Education, Other[4]	1,117	341	30.5	975	444	45.5	867	480	55.4	246	136	55.3	302	159	52.6

[1] "Education" originally listed under a single code. In 1960, single code broken out into 16 subfields. Cases coded under assigned "Education" code prior to 1960 were added to "Education, General". The 7 codes used prior to 1962 were converted. [2] Added in 1960. [3] Added in 1971. [4] Added in 1962. [5] Added in 1960 as "Administration". Changed in 1962 to "Admin. & Supervision". [6] Added in 1963. [7] Added in 1975. [8] Added in 1976. [9] Added in 1963 as "Other Special Field". In 1968 changed to "Other Fields" (meaning other teaching fields). [10] Added in 1983. [11] Added in 1980. [12] Name changed in 1983.

FIELD: Education

SOURCE: Earned Degrees Conferred Series, 1970-71 thru 1981-82, U.S. Office of Education (NCES)

TABLE 10-5

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 - 1981-82

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	177,638	132,236	74.4	89,067	50,020	56.2	6,398	1,355	21.2
1971-72	192,368	142,492	74.0	98,280	56,355	57.3	7,041	1,660	23.6
1972-73	195,640	143,816	73.5	105,646	61,450	58.2	7,314	1,813	24.8
1973-74	186,623	137,088	73.5	112,739	67,553	59.9	7,293	1,977	27.5
1974-75	168,749	123,703	73.3	120,233	74,733	62.2	7,443	2,296	30.8
1975-76	156,528	114,026	72.8	128,410	82,591	64.3	7,769	2,593	33.4
1976-77	143,658	103,740	72.2	126,375	83,201	65.8	7,955	2,769	34.8
1977-78	137,742	99,842	72.5	118,957	80,548	67.7	7,586	2,956	39.0
1978-79	127,853	93,568	73.2	111,834	76,734	68.6	7,731	3,263	42.2
1979-80	120,680	89,214	73.9	103,720	72,762	70.2	7,940	3,521	44.3
1980-81	108,265	81,196	75.0	98,381	70,301	71.5	7,900	3,736	47.3
1981-82	101,063	76,678	75.9	93,104	67,333	72.3	7,676	3,727	48.6
TOTAL	1,816,807	1,337,599	73.6	1,306,746	843,581	64.6	90,046	31,666	35.2

SOURCE: Affirmative Employment Statistics, CIG-82-71, U.S. Office of Personnel Management, September 30, 1982

TABLE 10-6

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN EDUCATION BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 1982

OCCUPATION SERIES	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		NATIVE AMERICAN		ASIAN		WHITE	
	Total	Women	%	Total	%	Women	%	No.	%	No.	%	No.	%	No.	%	No.	%
General Education & Training	1,043	408	39.1	173	16.6	79	7.6	44	4.2	9	0.9	25	2.4	1	0.1	329	31.5
Education & Vocational Training	18,450	11,096	60.1	3,553	19.3	2,253	12.2	862	4.7	174	0.9	1,066	5.8	151	0.8	8,843	47.9
Education Research & Program	847	332	39.2	242	28.6	131	15.5	115	13.6	13	1.5	1	0.1	2	0.2	201	23.7
Public Health Education	37	19	51.4	10	27.0	7	18.9	2	5.4			5	13.5			12	32.4
TOTAL	20,377	11,855	58.2	3,978	19.5	2,470	12.1	1,023	5.0	196	1.0	1,097	5.4	154	0.8	9,385	46.1

BIBLIOGRAPHY AND DATA SOURCES

Admissions Testing Program of the College Entrance Board, College Board Publication Orders, Box 2815, Princeton, NJ 18541

College Bound Seniors, 1983, copyright by College Board

American Anthropological Association, 1703 New Hampshire Avenue, N.W., Washington, DC 20009

Report of the 1983 Survey of Departments, 1983

American Assembly of Collegiate Schools of Business, 760 Office Parkway, Suite 50, Creve Cour, MO 63141

AACSB NEWSLINE, Vol. 13, No. 3, February 1983

Stat Sheet, 1984

American Association of Colleges of Osteopathic Medicine, 4720 Montgomery Lane, Washington, DC 20014

Annual Statistical Report, 1981; 1982; 1983 and 1984

Fall Enrollments Questionnaire 1974-77

American Association of Colleges of Pharmacy, 4630 Montgomery Avenue, Suite 201, Bethesda, MD 20014

Enrollment Report on Professional Degree Programs in Pharmacy, Fall 1976 through Fall 1983

Graduate Enrollment Report, Fall 1973 through Fall 1983

Graduate Study in Member Colleges, 1974-75

Report of Degrees Conferred by Schools and Colleges of Pharmacy, 1975-76 and 1978-79 by Lars Solander

Report of Degrees Conferred by Schools and Colleges of Pharmacy, 1979-80 by Stuart M. Speedie

Report of Degrees Conferred by Schools and Colleges of Pharmacy, 1981-82 by Steven H. Chasin

Report of Enrollment in Schools and Colleges of Pharmacy, 1973-74

The Status of Women in Pharmaceutical Education, by Christopher A. Rodowskas, Jr.

American Association of Colleges of Podiatric Medicine, 20 Chevy Chase Circle, Washington, DC 20015

Journal of Podiatric Medical Education, Vol. 12, No. 1, Winter 1981

Unpublished Data

American Association of Dental Schools, 1625 Massachusetts Avenue, N.W., Washington, DC 20036/
American Dental Association, Council on Dental Education, 211 E. Chicago Avenue, Chicago, IL 60611

Annual Report Dental Education Series, 1973-74 through 1983-84

Dental Faculty Information; Suppl. to Annual Report on Dental Education Series, 1976-77 through 1981-82

Personal communication, April 1983; June 1984

American Bar Association, 1155 East 60th Street, Chicago, IL 60637

A Review of Legal Education in the United States - Fall 1977; Fall 1978; Fall 1979; Fall 1980; Fall 1981; and Fall 1982 - Law Schools and Bar Admission Requirements, Section of Legal Education and Admission to the Bar, copyright by A.B.A.

American Chemical Society, 1155 - 16th Street, N.W., Washington, DC 20036

Committee on Professional Training, Unpublished Data

Data compiled for the Women Chemists Committee by Dr. Agnes Ann Greene

Professionals in Chemistry 1980, March 1981; 1981-82, March 1983

Report of the Women Chemists Committee, 1982-83, Unpublished Data

Salaries 1981, July 1981; 1982, June 1982; 1983, June 1983

Women Chemists 1980, September 1981

1976; 1978; and 1979 Report of Chemists' Salaries and Employment Status, July 1976; June 1978; July 1979; and July 1981

American Council on Education, One Dupont Circle, N.W., Washington, DC 20036

The American Freshman: National Norms for Fall 1971 and Fall 1972, ACE Research Reports, Vol. 6, No. 6, 1971 and Vol. 7, No. 5, 1972

"Getting to the Top - Women CEOs in Higher Education," by Judy Touchton, Comment, May 1984, Office of Women in Higher Education

Unpublished Data

American Council on Education/Office of Research and Cooperative Institutional Research Program, University of California at Los Angeles, Graduate School of Education, 405 Hilgard Avenue, Los Angeles, CA 90024

The American Freshman: National Norms for Fall 1973 through 1983, Office of Research and Cooperative Institutional Research Program, University of California at Los Angeles

American Economics Association, 1313 - 21st Avenue, Nashville, TN 37212

Report of the Committee on the Status of Women in the Economics Profession, 1981; January 1982; May 1984

American Geological Institute, 4220 King Street, Alexandria, VA 22302

"Student Enrollment 1972-73," Geotimes, October 1973

Student Enrollment in Geoscience Departments 1975-76 through 1981-83, Series

Unpublished Data

American Institute of Architects, 1735 New York Avenue, N.W., Washington DC 20006

Personal communication, June 1984

American Institute of Certified Public Accountants, 1211 Avenue of the Americas, New York, NY 10036

Minority Recruitment and Equal Opportunity Committee 1981 Report, 1982 Report and 1983 Report by Sharon L. Donahue

American Institute of Physics, 335 East 45th Street, New York, NY 10017

Enrollments and Degrees, R-151.11, May 1974; R-151-13, May 1976; R-151.15, April 1978; R-151-17, March 1980; R-151.18, February 1981; R-151.20, February 1983; R-151.21, March 1984

Graduate Student Survey, AIP Pub. No. R-207.11, February 1979; R-207.12, June 1980; R-207.13, May 1981; R-207.14, May 1982; and R-207.16, 1984, in press

"Women in Physics: Unnecessary, Injurious, and Out of Place?" by Vera Kistiakowsky, Physics Today, February 1980

Unpublished Data

American Mathematical Society, Box 6248, Providence, RI 02904

Notices, Vol. 25, No. 6, Issue No. 188, October 1978; Vol. 28, No. 2, November 1981 Vol. 29, No. 7, Issue 221, November 1982; Vol. 30, No. 7, Issue 229, November 1983

"Report on the 1983 Survey of New Doctorates," 28th Annual AMS Survey, 1983, Notices, Vol. 30, No. 7, November 1983

American Medical Association, 535 N. Dearborn Street, Chicago, IL 60610

Journal of the American Medical Association, Vol. 226, No. 8, 1973; Vol. 234, No. 13, December 29, 1975; Vol. 238, No. 26, December 26, 1977; Vol. 240, No. 26, December 20, 1978; Vol 243, No. 9, March 1980; Vol. 246, No. 25, December 1981; Vol. 248, No. 24, December 24/31, 1982, and Vol. 250, No. 12, September 23/30, 1983, copyright by AMA

American Optometric Association, 600 Maryland Avenue, S.W., Washington, DC 20002

Surveys conducted by the Council on Optometric Education

American Podiatry Association, 20 Chevy Chase Circle, N.W., Washington, DC 20015

Personal communication, 1984

American Physical Society, 335 East 45th Street, New York, NY 10017

CSWP Gazette, Issue No. 9, 1 March 1983, Committee on the Status of Women in Physics

"Survey Compiled for the APS Committee on the Status of Women," as reported in Physics Today, February 1982

American Political Science Association, 1527 New Hampshire Avenue, N.W., Washington, DC 20036

"Finding Jobs: Placement of Political Scientists 1982-83," by Robert J-P. Hauck, PS, Spring, 1984

"Non-Academic Jobs Will Not Relieve Tight Academic Market," by Robert J-P. Hauck, PS Winter, 1984

"Ph.D. Enrollments Continue to Decline," by Robert J-P. Hauck, PS, Winter 1984

"Political Science Degrees Awarded: An Update," by Robert J-P. Hauck, PS, Winter 1984

American Psychological Association, 1200 - 17th Street, N.W., Washington, DC 20036

"Service Providers in Psychology - Results of the 1982 APA Human Resources Survey," by Gary R. VandenBos and Joy Stapp, American Psychologist, Vol. 38, No. 12, December 1983

American Sociological Association, 1772 N Street, N.W., Washington, DC 20036

ASA Footnotes, December 1982

American Veterinary Medical Association/Association of American Veterinary Medical Colleges 1522 K Street, N.W., Suite 828, Washington, DC 20005

Personal Communication, November 1980, January 1982; April 1983; June 1984

Association of American Medical Colleges, One Dupont Circle, N.W., Washington DC 20036

"Medical Student Enrollment," 1971-72 through 1975-76, Journal of Medical Education, Vol. 51, February 1976; Vol. 52, February 1977; Vol. 53, April 1978; Vol. 54, December 1978

Unpublished Data

Association of Schools and Colleges of Optometry, 1730 M Street, N.W., Washington, DC 20036

Unpublished Data

Association of Schools of Public Health, 1015 Fifteenth Street, N.W., Sluite 404, Washington DC 20005

Unpublished Data, 1984

Civil Service Commission, U.S. SEE **Office of Personnel Management, U.S.**

College Entrance Examination Board, Educational Testing Service (ETS), SEE **Admissions Testing Program**

Commerce, U.S. Department of, Bureau of the Census, Washington, DC 20233

Historical Statistics of the U.S.

1980 Census of Occupations, Special EEO File

1980 Census of Population, Supplementary Report, May 1981

Education Commission of the States, 1860 Lincoln Street, Suite 300, Denver, CO 80295

The Third National Mathematics Assessment Results, Trends and Issues, National Assessement of Education Progress, Report 13-MA-01, April 1983

Education, U.S. Department of, National Center for Education Statistics, 400 Maryland Avenue, S.W. Washington, DC 20202

The Condition of Education, 1982 Edition

Data on Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity and Sex, Academic Year 1980-81, Office for Civil Rights, Unpublished

"Degrees Awarded to Women," 1979

Digest of Education Statistics, 1981, NCES 81-400; 1982, NCES 82-407; 1983-84, NCES 83-407

Earned Degrees Conferred, Series 1947-48 through 1981-82

Fall Enrollment in Higher Education, 1978, NCES 79-317; 1982, unpublished

Fall Enrollment in Colleges and Universities 1980, NCES 82-323

High School and Beyond, Longitudinal Survey, First Follow-up

Projections of Education Statistics to 1986-87, NCES 78-403; 1988-89, NCES 80-402; 1990-91, NCES 82-402-A

"Science and Math Education in American High Schools," NCES Bulletin 84-211b

Statistics of Nonpublic Elementary and Secondary Schools, 1965-66 and 1970-71

Statistics of Public Elementary and Secondary Day Schools, Fall 1964 through 1976

Statistics of Public and Nonpublic Elementary and Secondary Day Schools, 1968-69

Statistics of State School Systems 1953-54 through 1959-60

Unpublished Data

Women's Participation in First-Professional Degree Programs in Medicine, Dentistry, Veterinary Medicine, and Law, 1969-70 through 1974-75, NCES 76-023

Energy Research and Development Administration, SEE **Energy, U.S. Department of**

Energy, U.S. Department of, Washington, DC 20425

Nuclear Engineering Enrollments and Degrees, 1976, 1979, and 1980, 77-102, July 1977, ORAU-183, August 1981; 1981, ORAU-199, May 1982; 1983, DOE/ER-0165/7, May 1984

Radiation Protection Enrollments and Degrees, 1979 and 1980, ORAU-180, July 1981; 1981, ORAU-198, May 1982; Health Physics/Radiation Protection, Enrollments & Degrees 1983, DOE/ER-0193, February 1984

Engineering Manpower Commission, 345 East 47th Street, New York, NY 10017

Engineering and Technology Degrees, 1969 through 1983 Series

Engineering and Technology Enrollments, 1969 through 1983 Series

Health, Education and Welfare, U.S. Department of, SEE **Health and Human Services, U.S. Department of**

Health and Human Services, U.S. Department of, Health Resources Administration, Washington DC 20201

Minorities and Women in the Health Fields, May 1974; DHEW Pub. No. (HRA) 76-22, September 1975; October 1978; 1980; 1982 Edition, DHPA Report No. 7-82, October 1981; 1984 Edition, in manuscript

The Registered Nurse Population, November 1980, 1983

Supply of Dentists, Optometrists, Pharmacists, and Veterinarians: 1950-2000, July 1983

Supply and Characteristics of Selected Health Personnel, HDDS-HRA 81-20

Third Report to the President and Congress on the Status of Health Professions Personnel in the United States, January 1982

Women in Health Careers, by Maryland Pennell and Shirlene Showell, DHEW No. HRA 75-55, June 1975

Personal Communication

Hispanic Business, Plaza de Oro, 351 S. Hitchcock Way, Santa Barbara, CA 93105

Hispanic Business, Vol. 5, No. 4, April 1983

Howard, Suzanne, Ph.D., Educational Consultant, 402 Tennessee Avenue, Alexandria, VA 22305

Fact Sheet on Women in Education Administration, September 1980

Labor, U.S. Department of, Bureau of Labor Statistics, Washington, DC 20212

Employment and Earnings, Vol. 27, No. 1, January 1981; January 1983; Vol. 31, No. 1, January 1984

Monthly Labor Review, September 1982; February 1983; August 1983; March 1984

Students, Graduates, and Dropouts, October 1980-82, Special Labor Force Report, Bulletin 2192, Dec. 1983

Minnesota, University of, Minneapolis, MN 55455

Images of Science, Science Assessment and Research Project, Minnesota Research and Evaluation Center, June 1983

National Academy of Sciences/National Research Council, 2101 Constitution Ave., N.W., Washington, DC 20418

Doctorates Awarded 1920 to 1971 by Subfield of Doctorate, Sex and Decade, March 1973

Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, 1981

Science, Engineering and Humanities Doctorates in the U.S., 1981 Profile, 1982; 1983 Profile, 1984

Summary Report, Doctorate Recipients from United States Universities, 1962-83 Series

Women in Engineering, Medicine and Science by Vera Kistiakowsky, The Conference on Women in Science and Engineering, June 11-12, 1973

Women and Minority Ph.D.'s in the 1970's - A Data Book, 1977

National Center for Education Statistics, SEE **Education, U.S. Department of**

National Education Association, Office of Research, 1201 - 16th Street, N.W., Washington, DC 20036

Estimates of School Statistics, 1980-81, Research Memo, March 1981

National Science Foundation, 1800 G Street, N.W., Washington, DC 20550

Academic Science, Graduate Enrollment and Support, Fall 1980, Detailed Statistical Tables, NSF 81-330, 1981; Fall 1981, NSF 83-305; Fall 1982, NSF 84-306

Academic Science: Scientists and Engineers, January 1980, NSF 81-307; January 1981, NSF 82-305; January 1982, NSF 83-311; January 1983, NSF 84-309

Characteristics of Doctoral Scientists and Engineers in the United States: 1973-82 Series

Characteristics of Recent Science/Engineering Graduates: 1982, Detailed Statistical Tables, NSF 84-318

Doctorate Records File

Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, September 1981

Report of the 1977 National Survey of Science, Mathematics, and Social Studies Education, SE-78-72, reprint from Science Education Databook SE-80-3

Scientists and Engineers by Sex and Field: 1982, Unpublished Data

U.S. Scientists and Engineers, 1980, NSF 82-314

Women and Minorities in Science and Engineering, January 1982, NSF 84-300; January 1984, in press

Office of Personnel Management, U.S., Washington, DC 20415

Federal Civilian Workforce Statistics, Equal Employment Opportunity Statistics, SM 70-79B, November 1979; AR 80-71, November 1980; Affirmative Employment Statistics, CIG-82-71, September 30, 1982

Occupations of Federal White-Collar and Blue-Collar Workers, MW 56-17, October 31, 1981

Unpublished Data

Scientific Manpower Commission, 1776 Massachusetts Avenue, N.W., Washington, DC 20036

Supply and Demand for Scientists and Engineers, January 1982

Women's College Coalition, 1725 K Street, N.W., Washington, DC 20006

Profile of Women's College Presidents, December 1984

RECRUITMENT RESOURCES

American Studies

The Women's Committee of the American Studies Association has prepared a directory of about 250 women listed by field name, institutional affiliation, rank, area of expertise, teaching and administrative experience, publications and other notable career aspects. Included are the social sciences, writing, literature, music, art, architecture, mass media, popular culture, education and library science. The roster is available from Roberta K. Gladowski, American Studies Association, 4025 Chestnut Street/T7, University of Pennsylvania, Philadelphia, PA 19104. Women wishing to be added to the roster should submit their vita to the same address.

Architecture

The Alliance of Women in Architecture is gathering the names and addresses of women architects and students of architecture. Contact AWA, 18 East 13th Street, New York, NY 10003.

Asian Studies

The Association for Asian Studies has a Committee on the Role of Women in Asian Studies. Write the Committee c/o the Association for Asian Studies, One Lane Hall, University of Michigan, Ann Arbor, MI 48109.

Banking

The National Association of Bank Women has prepared a yearbook register of over 20,000 women in all areas within the profession, used for recommendations for consultant appointments, speaking engagements and personal reference. Contact Ms. Sharon Pierce, Executive Manager, NABW, 111 E. Wacker Drive, Chicago, IL 60601.

Biochemistry/Biomedical Sciences

Biochemistry/Biomedical Sciences Registry is a fully computerized registry of women and minority group biomedical scientists for use as an aid in job placement and appointments to committees and review boards. Includes name, address, age, degree(s) and year, institution, field and four sub-specialties, publications, salary range desired, availability for scientific, academic, administrative or industrial job, experience, awards, etc. Information updated every two years. Users contact: Incenter Corporation, 2116 Noudain Street, Philadelphia, PA 19146. Registrants contact: Dr. Helen C. Davies, American Society of Biological Chemists, 9560 Rockville Pike, Bethesda, MD 20014.

Chemistry

The American Chemical Society has a general and a confidential employment service. Candidates registered with the services may indicate minority status on a voluntary basis. Identification within a given search will be provided an employer for affirmative action needs. Approximately 600-700 candidates are registered at any given time. About 250 have indicated they are female and/or members of minority groups. When minorities and/or women appear in any search, they are now automatically identified. Registration for the open service is free to ACS members and student affiliates. Because of extra handling required, an annual listing fee of $25 is charged for the confidential service. The minimum charge for any search service is $25. If records of candidates are supplied for review, the cost is $50. Contact Employment Aids Office, American Chemical Society, 1155 - 16th Street, N.W., Washington, DC 20036. (Tel. 202-872-4528).

In the fall of 1974, the Women Chemists Committee of the American Chemical Society began an informal referral service to facilitate academic job placement. About 100 women ACS members receive announcements of job openings requiring a Ph.D. There is no fee. Contact: Women Chemists Committee, American Chemical Society, 1155 - 16th Street, N.W., Washington, DC 20036. (Tel. 202-872-4456).

Communication

The Employment Clearinghouse is based in the Office of Community Affairs of the National Association of Broadcasters in Washington, DC and is supported by financial assistance from broadcasting networks and stations. ECH coordinates its operations with broadcast skills banks located in several cities throughout the United States. ECH offers the following services primarily to minorities and women interested in careers in broadcasting: Initial Career Counseling, Broadcast Job Referral Services, Information on Broadcast Careers and Follow-up Counseling. Contact: Employment Clearinghouse, Office of Community Affairs, National Association of Broadcasters, 1771 N Street, N.W., Washington, DC 20036.

Economics

The Committee on the Status of Women in the Economics Profession maintains a roster of women economists which includes the address, publications record, highest degree, school and date of highest degree, current position and employer, primary and secondary specialties, and current availability for each woman economist listed. An annual directory with quarterly updates is based upon the roster. Entries in the directory are indexed by specialty and by geographic location. Economic specialties are indexed by specialty and by geographic location. Economic specialties are coded as listed in the Journal of Economic Literature, with further verbal description. The charge for the directory is $20 to nonprofit institutions, and $30 to others, payable to the Committee on the Status of Women in the Economics Profession. Requests should be sent to Nancy D. Rogers, ISPS, Box 16A, Yale Station, New Haven, CT 06520.

Engineering

The Society of Women Engineers has a roster of the members of the society including name, address, occupation, business and home phone numbers. All areas of the profession are represented, but it is used for membership services only. Job openings may be advertised in the SWE Newsletter which is subscribed to be more than 6,000 engineers in the U.S. and Canada. Information is available from: Society of Women Engineers, 345 East 47th Street, New York, NY 10017. (Tel. 212-644-7855).

Geography

The Committee on the Status of Women Geographers of the Association of American Geographers maintains a roster listing about 250 names, addresses, degrees, name and date of latest publication, Ph.D. dissertation or MA/MS thesis, current employment information and the individual's three major interests in geography. Contact Professor Susan Hanson, Dept. of Geography, Clark University, Worcester, MA 01610.

Geology

The Women Geoscientists Committee of the American Geological Institute has compiled a Roster of Women in the Geoscience Professions (3rd edition, January 1982). Its purposes are job placement, communication, education and appointment to advisory positions. Contact Chairman, Women Geoscientists Committee, American Geological Institute, 5205 Leesburg Pike, Falls Church, VA 22041.

Higher Education

Higher Education Administration Referral Service is a nonprofit organization which operates its registry as a general referral service for job placement for professional staff in higher education. It includes all exempt positions of a non-faculty nature. Special effort is made in canvassing potential registrants to include women and minority candidates, though they are not identified separately. It is a confidential and "equal opportunity" service. There is a small fee for registering and fees are charged to institutions using the service. Contact Higher Education Administration Referral Service, Suite 510, One Dupont Circle, N.W., Washington, DC 20036.

The Project on the Status and Education of Women serves as a clearinghouse for information on women in higher education and has developed materials on this subject, including legislative summaries, topical papers on re-entry women, sexual harrassment, minority women and other subjects; and a newsletter On Campus With Women. To receive a free publication list, contact the Project on the Status and Education of Women, Association of American Colleges, 1818 R Street, N.W. Washington, DC 20009.

History

The Committee on Women Historians of the American Historical Association has a published directory of over 2,000 women historians in all specialties including name, address, institutional affiliation, rank, degrees, institution, date of degree, dissertation subject, fields of specialization and publications. The directory is used to inform institutions about the availability of women in various fields of history for employment purposes as well as for conferences, book reviews, etc. Contact Assistant Executive Director, American Historical Association, 400 A Street, S.E., Washington, DC 20003.

A Directory of Black Historians & Others: Commentaries & Essays has been compiled by Dr. Gossie Hudson at Lincoln University. It includes information on blacks and non-blacks currently teaching black history, including addresses, positions, degrees and thesis topics. Extensively indexed with breakouts by degree, field, sex, location, etc., it also includes a set of essays by historians on the field of black history. The major purposes of the directory are for education and research. The price is $12.50. Contact Vance Bibliographies, P.O. Box 229, Monticello, IL 61856.

The Roster of Minority Graduate Students in History is a list of doctoral candidates divided into five fields of study covering United States, Latin American, European, Asian and African history. Within each field, one page resumes of each person are available. The material covers all minorities, but not specifically women. It is meant to be an employment aid. Compiled biennially, it is available from the History Department University of North Florida, Jacksonville, FL 32216.

Law

The Association of American Law Schools Section on Women in Legal Education has compiled a roster of 93 women in legal education, arranged alphabetically by name, with current address. May be obtained from Association of American Law Schools, One Dupont Circle, N.W., Washington, DC 20036.

Medicine

The Faculty Roster of the Association of American Medical Colleges is a general computerized registry of 50,000 M.D.'s on medical school faculties, used primarily for research and policy planning. Data on women and minorities can be retrieved separately, but no individual names. The Faculty Roster is updated on a monthly basis. In a typical month, about 2,500 faculty records are either added or brought up to date. It is estimated that the roster includes more than ninety percent of all U.S. medical school faculty. Of the 116 U.S. medical schools, 112 regularly report to the AAMC their new accessions, updates and terminations. Contact Association of American Medical Colleges, One Dupont Circle, N.W., Washington, DC 20036

Modern Language

A Directory of Women Scholars in the Modern Languages has been compiled by the Modern Languages Association Commission on the Status of Women in the Profession. This directory of more than

2,600 women qualified in English and foreign languages, cross-referenced by fields of interest including administration, lists name, title, rank, present institutional affiliation, institution and date of highest degree, major publications, honors, memberships and two or three current fields of interest. Published in 1973, it is available for $10 from the Modern language Association of America, 62 Fifth Avenue, New York, NY 10011.

Music

College Music Society's Committee on the Status of Women in the Profession has issued various reports on the Status of Women in College Music. Direct inquiries on the Committee and the reports to: Craig Short, Executive Secretary, College Music Society, Regent Box 44, University of Colorado, Boulder, CO 80309.

Philology

The American Philological Association's Women's Classical Caucus maintains a mailing list of over 150 men and women within the Association in the specialities of linguistics, ancient history, philosophy, Greek and Latin literature and classical archaeology. It can be obtained from Professor Phyllis Culham, Dept. of History, U.S. Naval Academy, Annapolis, MD 21402.

Physics

A special recruitment resource in physics and astronomy is the Committee on the Status of Women in Physics, American Physical Society. Contact American Institute of Physics, Manpower Placement Registry, 335 East 45th Street, New York, NY 10017.

Political Science

Biographical Directory - 1972 lists 226 persons alphabetically and includes address, institutional affiliation, degrees and field of specialization. The fee is $3.50. Contact the National Conference of Black Political Scientists, Carolyn Williams, Treasurer, Dept. of Political Science, Xavier University, New Orleans, LA 70125.

The Committee on the Status of Women in the Profession of the American Political Science Association maintains a roster of approximately 800 women including name, address, position, degree and field, research interest, skills and experience, and an index by field. The fee is $5. Request Women in Political Science, 4th Edition (1976), American Political Science Association, 1527 New Hampshire Avenue, N.W., Washington, DC 20036. A fifth Edition will be available in 1982.

Psychology

A special recruitment resource in psychology is the 1981 Directory. Contact American Psychological Association, 1200 17th Street, N.W., Washington, DC 20036.

Public Affairs

The National Association of Schools of Public Affairs and Administration maintains a roster of its 215 member institutions including data on women and minority faculty and students. The roster can be used as an aid in communication, seeking employment, and by prospective graduate students seeking a supportive atmosphere. First compiled in 1969, it is updated every two years. The fee is $10. Available from the NASPAA, 1225 Connecticut Avenue, N.W., Suite 307, Washington, DC 20036.

Science

The National Institute of Science, a black scientific professional association, has a roster of 300-400 members, including faculty and students. Its main purpose is communication. The roster is updated annually. Contact Dr. L. Shelbert Smith, Executive Secretary, NIS, Chemistry Dept., Central State University, Wilberforce, OH 45384.

AWIS Newsletter provides a listing of jobs available in science and engineering and announces fellowship awards and federally-supported programs in science and engineering. It is published every other month. Each issue is mailed to the 3,500 AWIS members. Additional copies are distributed at science meetings throughout the country. Available for $35 per year, it is free to AWIS members. The AWIS Registry of more than 7,000 women scientists and engineers is computerized for rapid search. It contains biographical information on several thousand women scientists and is organized by specialty. For $60 per position, AWIS will send a list of women looking for employment in the designated field and established persons who may know of other qualified candidates. If the search produces fewer than four candidates, the fee is waived. Each search request must include a purchase order and a detailed statement of position requirements. Contact the Association for Women in Science, Suite 1122, 1346 Connecticut Avenue, N.W., Washington, DC 20036.

Sociology

The Guide to Graduate Departments of Sociology 1981 provides specific information on the output of graduate programs by listing the 1979-80 Ph.D.'s dissertation titles and current positions. Data are collected via a questionnaire sent to all known graduate departments in the U.S. and Canada. The volume, updated annually, is available for $10 from the American Sociological Association, 1722 N Street, N.W., Washington, DC 20036.

Theology

Placement News is a bi-monthly newsletter published by the Women's Theological Coalition for women in theology and ministry at the master's and doctoral levels. The editor is Mary Caldwell, 210 Herrick Road, Newton Centre, MA 01259.

GENERAL

Affirmative Action: A Comprehensive Recruitment Manual provides sources for minority group recruiting, including information on colleges with the largest numbers of Black, Asian, Hispanic and Native American Students. Also includes a list of minority media, a roster of predominantly black colleges, suggestions for recruiting and an extensive bibliography. Available for $15 ($14 prepaid) from Garrett Park Press, Garrett Park, MD 20896.

American Association of University Women has a listing of Professional Women's Groups, May 1981 which offers one or more of these services regarding employment opportunities: a roster of women for employers seeking female applicants, listings of job openings in their newsletters, financial aid and career information. This roster is available for $1 prepaid, from American Association of University Women, 2401 Virginia Avenue, N.W., Washington, DC 20037.

The Black Collegian Resume Service publishes the Monthly Resume File Reader and two Resume Books each year. The Resume File Reader contains pertinent data from each resume. It contains file number, major, university, graduation date, grade point average, career objective, etc. Full copies of the resume can be ordered by sending in the file number. Companies contact the students directly. The Resume Service is provided free to advertisers in The Black Collegian magazine. For more information contact Preston J. Edwards, Publisher, The Black Collegian, 1240 South Broad Street, New Orleans, LA 70125. (Tel. 504-821-5694).

Handbook for Recruiting at Minority Colleges, 1982-83 Edition, contains profiles of 94 four-year colleges and universities with predominant enrollments of minority students. It is used to locate and recruit graduates from predominantly minority colleges. Edited by Andre G. Beaumont and Rena D. Godbolt, it is available for $12.50 from College Placement Services, Inc., 62 Highland Avenue, Bethelehem, PA 18017.

Locating, Recruiting and Employing Women: An Equal Opportunity Approach by Cecelia Foxley lists some 300 women's organizations with talent banks or other employment/career assistance as well as a list of 600 women's counseling and placement centers. The price is $8.50 ($7.50 prepaid). The publication is available from Garrett Park Press, Garrett Park, MD 20896.

Minority Organizations: A National Directory lists approximately 3,200 national, regional and local organizations with largely minority memberships, or whose purpose is service to the minority community. Available for $15 ($14 prepaid) from Garrett Park Press, Garrett Park, MD 20896.

Native American Professional Resource Directory is a computerized roster of over 1,000 Native Americans published in 1973 for educational, communication and employment purposes. Names are listed alphabetically with address, tribe, position, expertise and education. Sponsored by the Bureau of Indian Affairs, the publication is available for $4.50 from the Southwestern Cooperative Educational Laboratory, 229 Truman, N.E., Albuquerque, NM 87108.

Preparing for Affirmative Action: A Manual for Practical Training is a workbook of exercises for training in the area of equal employment. Review set available for $10, from Garrett Park Press, Garrett Park, MD 20896.

Women's Organizations and Leaders Directory - 1982 is an international guide to the women's movement with over 25,000 listings (primarily organizations, government branches, etc.) and their leaders. Cost per book is $70 ($65 prepaid). Contact Today News Service, Inc., National Press Building, Washington, DC 20045.

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